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STUDIES ON THE CLASSIFICATION OF THE *PENICILLIA*

(CONTINUED)

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Table C-1. Colony characteristics of *P. thomii series*.

Rate of Growth.							Strain No.	Texture	5–6 Days Depth μ	10–12 Days Depth μ	Character of Surface.	Character of Margin
Steep agar mm.			Culture Temp.	Czapek agar mm.								
20 Days	10 Days	5 Days		5 Days	10 Days	20 Days						
	0		37°C		0		1181	Velvety	150–250 –500	150–300 –500	More or less Radiately Furrowed	0.5mm.: White or Orange
	38		30°C		30							
62	35 –36	17	25°C	15	25	56	S 〃	Velvety	200–300 –600	200–300 –600	〃	〃
	38		37°C		37		388	Velvety or Subfloccose	200–500 –1100	200–800 –1100	Conspicuouly Furrowed	0.5mm.: White
	50		30°C		54							
54	45	25	25°C	19	37	50	S 〃	〃	200–600 –1000	250–900 –1200	〃	〃
	0		37°C		0		340	Velvety	200–250 –700	200–400 –700	Smooth or Plane	1.0–2.0 mm.: Tine, White
	58		30°C		60							
85	63	37	25°C	34	80	84	S 〃	〃	200–250 –800	200–400 –800	CA: Loosely Furrowed	〃
	13		37°C		7 –8		362 363	Velvety	100–200 –500	150–300 –500	Buckled, Slighlty Wrinkled.	0.5mm.: White
	28		30°C		22							
47	25 –26	16	25°C	14	16 –20	34 –36	S 〃	〃	200–300 –550	200–350 –600	Radially Wrinkled	〃

Colony Color and Color Changes	Exudate	Colony Reverse	Pigmentation of Substratum	Sclerotia
MA: Flame Scarlet or Grenadine Red mycelium, Glaucous. CA: English Red mycelium	Abundantly English Red or Flame Scarlet.	MA: Orange. CA: Xanthine Orange —MA: Mars Orange CA: Chestnut	5 mm: Deep Chrome —Full: 〃	Sclerotia enveloped of Scarlet or Grenadian Red mycelium on entire surface.
〃—Similar color mycelia, American Green	〃	Orange Rufous —Mahogany Red	〃	〃
Artmesia Green —〃	Limitedly Light Orange Yellow	Orange —Mars Orange	10 mm.: Martius Yellow —15 mm.: Sulphur Yellow	Maize Yellow or Orange Yellow Sclerotia in Central Area., localized.
〃	〃	Mars Yellow —〃	〃	〃
Empire or Danube Green —〃	Abundantly or Limited, Uncolor or Chamois	Pale Green Yellow —Naples Yellow	Full: Pale Green Yellow —〃	Pinkish Cinnamon or Salmon Orange shades Sclerotia, in central area, localized.
〃—Dusky Olive Green	〃	Primuline Yellow	Full: Primulin Yellow—〃	〃
MA: Pale Grayish Vinaceous mycelium, Bluish Glaucous. CA: Wood Brown or Fawn Color. —MA: Russet or Army Brown. CA: Wood Brown.	Abundantly Warm or Ochraceous Buff	MA: Taupe Brown CA: Dull Indian Purple —Dull Violet Black	Uncolor —Full: Light Purplish Vinaceous	Pinkish Cinnamon Sclerotia, on entire surface.
Sage Green in MA or CA localized. —〃	〃	Anthracene Purple or Aniline Black —〃	〃	〃

Table C-2. Colony characteristics of the *Monoglobosa series*. (1)

Rate of Growth							Strain No.	Texture	5-6 Days Depth μ	10-12 Days Depth μ	Character of Surface
Steep agar mm.			Culture Temp.	Czapek agar mm.							
20 Days	10 Days	5 Days		5 Days	10 Days	20 Days					
	0		37° C		0		13. 559. 576.	Velvety	200-300 -450	200-400 -600	Smooth, Buckled; Radially Furrowed
	57-62		30° C		47-56						
80-82	78-82	34-36	25° C	32-34	58-70	64-74	S 〃	〃	200-350 -450	250-400 -5-600	〃
	0		37° C		0		732.	Typical Velvety	200-300 -600	250-400 -600	Radial Furrowed
	60		30° C		55						
72	60	32	25° C	23	50	67	S 〃	〃	200-400 -600	200-400 -600	〃
	0		37° C			0	1120. 668.	Typical Velvety	200-300 -5-600	200-300 -6-800	Cerebriform or Radial Furrowed
	60-70		30° C		50-58						
80	70-80	48-50	25° C	42-45	70-71	75-78	S 〃	〃	250-400 -5-800	250-400 -8-1000	〃
	0		37° C		0		1137.	Velutinous	200-400 -600	200-500 -700	Smooth
	61		30° C		64						
80	74	28	25° C	30	72	79	S 〃	〃	250-400 -800	250-500 -800	〃
	0		37° C		0		587. 639. 571. 621. 14. 15.	Velutinous or Floccose or Funiculose	100-400 -500 -1000	150-400 -7-1000	Smooth or Loosely Radial Furrowed
	55-79		30° C		65-72						
75-80	65-80	32-36	25° C	28-34	66-76	75-80	S 〃	〃	150-400 -5-600	200-500 -7-1000	〃
	0		37° C		0		84.	Typical Funiculosum	200-300 -400	200-400 -600	Raised in CA; Radial Furrowed
	40		30° C		37						
54	37	18	25° C	16	30	42	S 〃	〃	200-300 -800	200-800 -1500	〃
	0		37° C		0		779.	Subfloccose	200-500 -800	300-700 -900	Radial Furrowed; Buckled or Sulcate in CA
	27		30° C		30						
48	33	18	25° C	16	31	45	S 〃	〃	250-600 -900	300-700 -1000	〃
	0		37° C		0		1343.	Floccose or Funiculose	300-400 -800	400-800 -1000	Smooth or Thin
	34		30° C		23						
30	25	10	25° C	8	20	24	S 〃	〃	350-500 -850	500-600 -1000	〃

Character of Margin	Colony Color and Color Change	Exudate	Colony Reverse	Pigmentation of Substratum
1.5–2.0 mm.: Loosely White	Bluish Gray Green, Dark Russian Green —Dusky Olive Green or Andover Green	Lacking	Brazil Red —MA: Sanford Brown CA: Mahogany Red	Colorless or Pale Pinkish Cinnamon —Full: Light Pinkish Cinnamon
〃	〃	〃	English Red —Chestnut Brown	Full: Colorless—Hazel
0.5 mm.: Grayish White	MA: Greenish Glaucous Blue CA: Dusky Olive Green —Dark Greenish Olive	Lacking	Cinnamon Drab —Army Brown	Colorless —Full: Sulphur Yellow
〃	Dark Russian Green —Olive	〃	Yellow Ocher —Soyal Brown	〃
1.0–1.5 mm.: White	Dark Green or Dusky Yellowish Green, Dark American Green —Dusky Olive Green or Ivy Green	Lacking	Colorless — 〃 or Pinkish Buff	Colorless
〃	〃	〃	〃	〃
2.0 mm.: White	Dark Russian Green —Dull Blackish Green	Lacking	Pinkish Buff —Massicot Yellow	Colorless
1.5 mm.: White	Bottle Green —Dull Blackish Green	〃	〃	〃
2.0–3.0 mm.: White	Dark Dull Yellow Green, Hay's Green or Yew Green — 〃 or Deep Grayish Green or Leaf Green	Limitedly, Colorless	Colorless or Marquerite Yellow— 〃 (Violet Slate or Deep Slate Violet in 15 to 30 days on Czapek slant)	Colorless
〃	〃	〃	〃	〃
0.2–0.5 mm.: White	Mineral Gray or Pale Olive Gray — 〃 or Tea Green	Abundantly, Colorless	Light Vinaceous Lilac in 6 to 7 days —Sulphur Yellow — 〃	8 mm.: Sulphur Yellow —15 mm.: 〃
〃	〃	〃	〃	〃
2.5 mm.: White	Smoke Gray — 〃	Limited, Colorless	Cream Buff or Antimony Yellow —Chamois	Colorless
〃	〃	〃	Xanthin Orange — 〃	〃
10–15 Tine, White	Olivaceous Black — 〃	Lacking	Colorless	Colorless
1.0–2.0 mm.: White	〃	〃	Auburn — 〃	10 mm.: Sanford Brown—15 mm.: 〃

Table C-3. Colony characteristics of the *Monoglobosa series*. (2)

Rate of Growth: Steep agar mm. 20 Days	10 Days	5 Days	Culture Temp.	Czapek agar mm. 5 Days	10 Days	20 Days	Strain No.	Texture	5–6 Days Depth μ	10–12 Days Depth μ	Character of Surface
	0		37° C		0		103. 632. 627. 323. 1029.	Velvety	100–200 –4–500	150–250 –3–600	Smooth or Radial Furrowed
	57–71		30° C		47–64		1254. 1256.				
76–80	63–76	25–33	25° C	22–34	62–75	72–78	S 〃	〃	100–250 –3–500	150–300 –4–600	〃
	0		37° C		0		839. 570. 590.	Velutinous	100–200 –25–600	150–300 –5–600	Loosely or Typical Furrowed
	60–67		30° C		52–55		826. 1032.				
75–84	65–75	25–49	25° C	20–35	59–65	70–75	S 〃	〃	100–300 –5–600	150–300 –5–700	〃
	0		37° C		0		1223. 12.	Funiculose	200–300 –8–2000	200–400 –8–3000	Smooth, Raised in CA
	62–65		30° C		52–61		30.				
80	74–77	34–47	25° C	28–40	64–72	75–80	S 〃	〃	200–500 –8–2000	200–500 –8–3000	Radial Furrowed
	0		37° C		0		568. 1022. 1176.	Velvety	150–400 –8–1000	150–400 –8–1200	Plan or Smooth
	24–30		30° C		22–25		1229.				
40–46	26–32	16–18	25° C	14–15	24–25	34–40	S 〃	〃	200–400 –8–1000	200–400 –10–1300	〃
	0		37° C		0		967. 970. 959.	Velutinous or Subfloccose	200–400 –7–1000	300–600 –8–1400	Buckled; Radiately Furrowed
	31–37		30° C		22–31		196. 567.				
44–55	30–37	17–18	25° C	11–14	20–27	42–50	S 〃	〃	200–500 –7–1200	350–600 –8–1400	〃
	0		37° C		0		653. 960. 359.	Floccose or Funiculose	200–600 –8–1000	300–800 –11–1400	Deeply; Smooth or Slightly Furrowed
	29–38		30° C		26–32		360. 1023.				
43–50	34–39	19–21	25° C	12–20	24–35	39–47	S 〃	〃	200–700 –9–1100	300–900 –10–1400	〃
	0		37° C		0		569. 326.	Floccose or Subfloccose	150–400 –6–700	200–400 –7–1000	Buckled; Smooth or Slightly Furrowed
	26–41		30° C		22–37						
43–51	29–45	17–18	25° C	17–20	23–36	33–56	S 〃	〃	200–700 –10–1300	200–800 –11–1400	〃
	0		37° C		0		122. 123.	Typical Velvety or Velutinous	50–150 –3–700	100–200 –4–1000	Bucklek Sulcate Radial Furrowed
	29–37		30° C		24–31		124.				
40–42	30–35	13–20	25° C	11–18	22–30	36–40	S 〃	〃	100–200 –3–800	150–300 –5–1000	〃

Character of Margin	Colony Color and Color Change	Exudate	Colony Reverse	Pigmentation of Substratum
1.0–1.5 mm.: White	Dark Russian Green, Dark American Green, Terre Verte —Grayish Olive, Andover Green, Dusky Yellowish Green	Lacking	CA: Sulphin or Citrine Yellow MA: Antique Brown, Mars Yellow —Amber Brown, English Red (MA.)	Full: Citron Yellow or Colorless —Full: Wax Yellow or Cinnamon
〃	〃	〃	〃	〃
1.5–1.8 mm.: White	Dark Yellowish Green or Dark American Green —Dark Dull Yellow Green or 〃	Lacking or Limitedly, Clay Color	Mars Yellow or Xanthine Orange —Amber Brown	Colorless or Pale Pinish Buff —Full: 〃
〃	〃	〃	Amber Brown —Walnut Brown	〃
1.0–2.0 mm.: White	Dusky Yellowish Green, Elm Green — 〃	Lacking	Yellow Ocher or Colonial Buff —Vinaceous Tawny or Snuff Brown	Colorless or 10 mm: Pinkish Cinnamon —Full: 〃
〃	〃	〃	〃	〃
0.2–0.5 mm.: White	Greenish Glaucous Blue or Deep Bluish Glaucous —Grayish Blue Green or Bluish Gray Green	Abundantly, Lemon Chrome	Lemon Chrome — 〃	15–20 mm.: Picric Yellow —Full: 〃
〃	〃	〃	〃	〃
0.3–0.6 mm.: White	Winter Green, Russian Green —Artmesia Green, Storm Gray	Abundant, Limitedly, Pale Greenish Yellow	Light Greenish Yellow — 〃	18–22 mm.: Pale Greenish Yellow —Full: 〃
〃	〃	〃	〃	〃
0.5–1.5 mm.: White or Pale Yellow	Dark Yellowish Green or Deep Dull Yellow Green —Lincoln Green, Sage Green	Limitedly, Lemon Yellow	Lemon Yellow or Light Greenish Yellow — 〃	20–25 mm.: Lemon Yellow —Full: 〃
〃	〃	〃	〃	〃
0.2–1.0 mm.: White	Greenish Glaucous Blue —Artmesia Green or Gnaphalium Green	Limited, or Abundantly, Sulphur Yellow	Sulphur Yellow — 〃	Colorless — 〃 or Weakly Sulphur Yellow
〃	〃	〃	〃	〃
0.3–1.0 mm.: White or Grayish White	Sage Green, Vetiver Green —Tea Green, Citrine Drab	Lacking or Limitedly, Pale Lemon Yellow	MA: Oil Yellow or Aniline Yellow CA: Raw Umber, Medal Bronze — 〃	10–15 mm.: Martius Yellow — 〃, Light Greenish Yellow
〃	〃	〃	〃	〃

Table C-3. Colony characteristics of the *Monoglobosa series*. (3)

Rate of Growth: Steep agar mm. 20 Days	Steep agar mm. 10 Days	Steep agar mm. 5 Days	Culture Temp.	Czapek agar mm. 5 Days	Czapek agar mm. 10 Days	Czapek agar mm. 20 Days	Strain No.	Texture	5-6 Days Depth μ	10-12 Days Depth μ	Character of Surface
	0		37° C		0		1291.	Funiculose or Floccose	300–800 –1200	300–1000 –1200	Radial Furrowed, Deeply
	27		30° C		40						
54	34	20	25° C	18	33	50	S 〃	〃	300–800 –1000	300–1000 –1200	〃
	0		37° C		0		637. 1208.	Velvety	150–200 –6–700	150–250 –7–1000	Smooth or Loosely Furrowed
	40–45		30° C		46–47						
68–70	43–47	20–22	25° C	14–18	24–47	60–64	S 〃	〃	200–250 –3–400	200–300 –600	Radial Furrowed
	0		37° C		0		1051.	Velvety	300–400 –500	300–500 –600	Rdiately Furrowed
	48		30° C		43						
68	48	24	25° C	14	45	66	S 〃	〃	120–250 –300	200–400 –600	〃
	0		37° C		0		125.	Velvety	150–350 –700	200–400 –700	Radially Furrowed
	43		30° C		40						
58	43	20	25° C	18	30	50	S 〃	〃	150–550 –700	200–580 –700	〃
	0		37° C		0		934. 933. 1214. 929. 1186. 1216. 1230.	Velvety or Deeply Velutinous	150–300 –9–1200	200–400 –6–1300	Radially Furrowed
	38–55		30° C		24–45						
60–73	33–48	17–26	25° C	16–18	23–43	46–70	S 〃	〃	200–400 –5–1200	200–400 –8–1200	〃
	0		37° C		0		780. 1288.	Subfloccose	300–400 –10–1100	300–500 –10–1200	Buckled, Radiately Furrowed
	35–37		37° C		30–32						
57–59	40–42	18–20	25° C	13–16	35–38	56–57	S 〃	〃	300–600 –10–1200	300–700 –10–1300	〃
	0		37° C		0		776.	Funiculose	200–500 –1200	250–500 –1200	Radially Furrowed
	46		30° C		34						
58	42	16	25° C	11	35	56	S 〃	〃	300–600 –800	300–800 –1200	〃
	0		37° C		0		1290.	Funiculose	100–300 –600	200–500 –1000	Smooth, Raised in CA
	55		30° C		50						
60	38	28	25° C	25	37	60	S 〃	〃	100–300 –800	200–400 –1000	〃

Character of Margin	Colony Color and Color Change	Exudata	Colony Reverse	Pigmentation of Substratum
0.2 mm.: White	Light Mineral Gray	Abundantly, Mars Violet	Dark Vinaceous Purple —Aniline Black	Full: Purplish Vinaceous —Full: Dark Vinaceous Purple
〃	Mineral Gray — 〃	〃	〃	〃
1.0–1.2 mm.: Capucine Yellow — 〃	MA: Deep Bluish Gray Green, Light Danube Green CA: Nickel Green —Deep Slate Olive	Limited, Xanthine Orange	MA: Cadmium Yellow CA: Xanthine Orange —Buret Sienna	12 mm.: Apricot Yellow —Full: Deep Chrome
〃	〃	〃	〃	〃
1.0 mm.: Orange Chrome	MA: Dark Bluish Gray Green CA: Dark Russian Green (Orange Chrome, English Red mycelium, abundantly) —Deep Slate Olive	Lacking	MA: Deep Chrome CA: Orange Rufous —Mahogany Red	10 mm.: Baryta Yellow —Full: Sulphine Yellow
〃	〃	〃	〃	〃
1.0 mm.: White or 1.0 mm.: Cream Buff	Bluish Gray Green —Dark Russian Green (Cream Buff Mycelium)	Limitedly, Cinnamon Buff	MA: Capucine Yellow CA: Chestnut —MA: Chestnut CA: Maroon	10 mm.: Yellow Ocher —20 mm.: Xanthine Orange
〃	〃	〃	Brazil Red — 〃	〃
1.0–2.0 mm.: Abruptly Deep, Pale Yellow	MA: Bluish Gray Green CA: Dull Blackish Green —Andover Green, Slate Olive (Pale Green Yellow mycelium)	Lacking or Limitedly, Yellow	Cadnium Yellow or Orange Rufous —Grenedine Red	Colorless —5–10 mm.: Viridine Yellow
〃	〃	〃	〃	〃
0.3–1.0 mm.: White	Gnaphalium Green, Celandine Green —Mineral Green, Pea Green	Lacking	Morocco Red, Ox-Blood Red —Maroon	10–18 mm.: Rufous, Flame Scarlet —Full: Brazil Red
〃	〃	〃	〃	〃
0.3 mm.: White	Dark Bluish Glaucous —MA: Dark Bluish Gray Green CA: Citrine Drab	Abundantly, Colorless	Ochraceous Buff —Ochraceous Salmon —Ferruginose in one month	10 mm.: Ochraceous Buff — 〃
〃	〃	〃	〃	〃
2.0 mm.: White	Vetiver Green or Andover Green — 〃	Abundantly, Ochraceous Salmon	Brazil Red —English Red	Colorless —15 mm.: Ochraceous Salmon
〃	〃	〃	〃	〃

Table C-4. Colony characteristics of the *Monoelliptica series*. (1)

Rate of Growth: Steep agar mm. 20 Days	Steep agar mm. 10 Days	Steep agar mm. 5 Days	Culture Temp.	Rate of Growth: Czapek agar mm. 5 Days	Czapek agar mm. 10 Days	Czapek agar mm. 20 Days	Strain No.	Texture	5–6 Days Depth μ	10–12 Days Depth μ	Character of Surface
	0		37° C		0		252. 631.	Velvety or Velutinous	280–300 –450–600	280–400 –10–1100	Smooth
	20–70		30° C		14–55						
82–85	70–74	28–30	25° C	14–18	53–70	80	S 〃	〃	300–500 –8–1000	300–800 –10–1200	Radial Furrowed
	0		37° C		0		24	Velutinous or Subfloccose	200–300 –800	300–400 –800	Smooth or Plane
	57		30° C		39						
80	70	40	25° C	31	60	67	S 〃	〃	200–300 –800	200–300 –1000	〃
	0		37° C		0		1138,	Velutinous	200–400 –800	200–500 –800	Smooth
	47		30° C		55						
73	45	23	25° C	20	48	70	S 〃	〃	300–400 –800	300–700 –800	〃
	0		37° C		0		728.	Velutinous or Subfloccose	200–400 –600	200–500 –600	Smooth or Loosely Furrowed
	46		30° C		46						
65	43	18	25° C	17	42	60	S 〃	〃	300–500 –1100	300–700 –1100	Radial Furrowed
	0		37° C		0		1081.	Velutinous or Subfloccose	60–80 –100	60–100 –150	Smooth, Plane, Raised in CA.
	10		30° C		8						
14	10	3	25° C	3	8	12	S 〃	〃	60–200 –400	60–200 –400	〃

Table C-5. Colony characteristics of the *Monoelliptica series*. (2)

	0		37° C		0		877. 626. 73.	Loosely Velutinous	200–800 –10–1300	200–800 –10–1300	Radial Furrowed
	43–60		30° C		40–45						
75–78	72–76	36–40	25° C	32–37	51–70	69–72	S 〃	〃	300–800 –10–1400	300–800 –12–1500	〃
	0		37° C		0		1008. 121. 649.	Velutinous	200–300 –45–500	300–400 55–600	Lightly Radial Furrowed
	65–66		30° C		45–57						
80–82	76–77	34–35	25° C	28–30	66–70	70–74	S 〃	〃	200–300 –380–500	200–400 –500	〃

Character of Margin	Colony Color and Color Change	Exudate	Colony Reverse	Pigmentation of Substratum
1.5 mm.: White	Dark Russian Green or Dull Blackish Green — 〃 or Dusky Yellowish Green	Lacking or Limitedly, Isabella Color	CA: Verona Brown MA: Honey Yellow —Brownish Olive	7–10 mm.: Sulphur Yellow —Full: 〃
〃	〃	〃	Bister—Saccardo's Umber	〃
1.2 mm.: White	Stone Green —Light Yellowish Olive	Lacking	Colorless —Drab	Colorless
〃	〃	〃	〃	〃
1.2 mm.: White	Dusky Dull Green — 〃	Lacking	CA: Deep Purplish Vinaceous MA: Oil Yellow —Olivaceous Black	10 mm.: Sulphur Yellow —Full: Empire Yellow
〃	〃	Limitedly, Cinnamon	Raw Umber —Sepia	〃
1.0 mm.: White	MA: Dusky Dull Green CA: Dull Blackish Green — 〃	Lacking	CA: Dusky Yellowish Green MA: Antimony Yellow —Chaetura Drab	Colorless —15 mm.: Sulphur Yellow
0.4 mm.: White	〃	〃	Raw Umber —Fuscous	〃
Thin; Narrowly; Similar Shades in conidial Color	Dusky Yellowish Green — 〃	Lacking	Colorles	Colorless
〃	〃	〃	〃	〃
3–5 mm.: Broady, White	Civette Green and American Green —Deep Olive or Citrine Drab.	Lacking	CA: Sulphur Yellow MA: Light Ochraceous Buff —CA: 〃 MA: Bittersweet Orange	Colorless
〃	〃	〃	〃	〃
2 mm.: White	Dark Yellowish Green or Dark Dull Yellow Green — 〃	Lacking	Light Phlox Purple, Pale Hortense Violet in 5 to 7 days —Sulphur Yellow	Colorless
〃	〃	〃	Yellow Ocher — 〃	〃

Table C-5. (Continued)

Rate of Growth: Steep agar mm. 20 Days	10 Days	5 Days	Culture Temp.	Czapek agar mm. 5 Days	10 Days	20 Days	Strain No.	Texture	5–6 Days Depth μ	10–12 Days Depth μ	Character of Surface
	0		37° C		0		74. 561.	Velutinous or	200–300 –4–600	200–450 –5–600	Loosely Radial Furrowed
	65–70		30° C		58–68		601.	Loosely			
82–85	78–80	30–37	25° C	25–31	69–75	72–76	S 〃	〃	200–400 –450–500	200–400 –500	〃
	50		37° C		42		1278.	Funiculose or	100–200 –500	200–300 –550	Smooth
	60		30° C		52			Floccose			
80	60	42	25 C	33	52	80	S 〃	〃	200–300 –600	200–300 –800	Radial Furrowed
	0		37° C		0		1292.	Funiculose	150–300 –400	200–300 –400	Radial Furrowed
	17		30 C		15						
37	20	12	25 C	8	15	32	S 〃	〃	150–300 –400	200–300 –400	〃
	0		37° C		0		825. 1218.	Velvety or	100–300 –5–1300	150–350 –1–1500	Smooth; Piled in CA.
	30–37		30 C		28–35		1220. 977.	Velutinous			
70–75	38–41	17–18	25° C	13–15	33–36	67–72	S 〃	〃	100–300 –12–1500	100–400 –13–1900	Loosely Radial Furrowed
	0		37° C		0		137. 1299. 563.	Velvety	200–400 –10–1200	200–500 –8–1500	Smooth or Radiately Furrowed
	32–36		30° C		30–40		640.				
56–67	33–39	14–17	25° C	13–15	31–40	52–64	S 〃	〃	150–400 –8–1200	150–500 –8–1800	〃
	0		37° C		0		807. 813. 936.	Velvety or Velutinous	150–300 –54–900	150–300 –45–1000	Smooth, Piled in CA.
	38–50		30° C		35–50		829.				
70–73	40–51	20–21	25° C	12–20	33–48	60–64	S 〃	〃	150–300 –5–1000	180–400 –7–1200	〃
	0		37° C		0		328. 367.	Typical Velvety	80–200 –250	150–300 –5–600	Smooth or Lightly Furrowed
	33–36		30° C		25–28						
45–59	29–30	13–15	25° C	9–12	24–25	43–46	S 〃	〃	80–300 –4–500	100–300 450–600	〃
	0		37° C		0		1301. 1302.	Typical Velvety or Funiculose	50–200 –3–500	100–200 –3–800	Smooth or Radiately Furrowed
	38–39		30° C		33–39						
64–68	37–39	14–18	25° C	10–14	33–39	58–60	S 〃	〃	100–200 –3–800	100–200 –3–1500	〃

Character of Margin	Colony Color and Color Change	Exudate	Colony Reverse	Pigmentation of Substratum
2 mm.: White	Dark American Green —Leaf Green	Lacking	Pale Hortense Violet in 5–7 days —Naples or Cream Yellow — 〃	Colorless
〃	〃	〃	〃	〃
2.5 mm.: White	Water Green —Tea Green or Olive Buff	Abundantly, Colorless	CA: Vinaceous Fawn MA: Colorless —Pale Vinaceous Fawn or Pompeian Red	Colorless
〃	〃	〃	〃	〃
1.0 mm.: Thin, White	MA: Deep Bluish Glaucous CA: Tea Green — 〃	Lacking	Perilla Purple —Mars Violet	10 mm.: Purplish Vinaceous —20 mm.: 〃
〃	〃	〃	〃	〃
1.0–2.0 White	Dark Russian Green, Dark American Green —Dull Blackish Green	Limited or Abundantly. Colorless. Pale Yellow	Pale or Light Greenish Yellow —Lemon Yellow	10–15 mm.: Pale or Light Greenish Yellow —Full: Lemon Yellow
〃	〃	〃	〃	〃
1.0–2.0 mm.: White	Bluish Gray Green or Dark Russian Green — 〃 or Dark Porcelain Green	Abundantly or Limited Yellow	Naphthalene Violet or Blackish Purple in 3–5 days —Picric Yellow —Lemon Yellow	15–20 mm.: Picric Yellow —Full: 〃
〃	〃	〃	〃	〃
1.0–1.5 mm.: White	MA: Bluish Gray Green CA: Dark Green or Andover Green —Andover Green	Lacking or Limitedly, Pale Yellow	Cadmium Yellow —Orange Rufous —Scarlet or Brazil Red in 1 month	Colorless —10 mm.: Pale Viridine Yellow
〃	〃	〃	〃	〃
0.3 mm.: White	Dark Bluish Gray Green —Bottle Green or Duck Green	Limited, Mars Yellow	MA: Raw Sienna CA: Argus Brown —Warm Blackish Brown, Blackish Brown	15 mm.: Raw Sienna —Full: Amber Brown
〃	〃	〃	〃	〃
1.0–1.5 mm.: White	MA: Greenish Glaucous Blue CA: Pea Green —Sage Green or Pea Green	Limitedly, or Abundantly, Aniline Yellow	Orange or Orange Cinnamon —Mars Orange, Pale Vinaceous	Full: Vinaceous Tawny —Full: Xanthine Orange — 〃
〃	Sage Green — 〃	〃	Orange Rufous — 〃	Full: Mahogany Red — 〃

Table C-6. Colony characteristics of the *Monoelliptica series*. (3)

Rate of Growth: Steep agar mm. 20 Days	Steep agar mm. 10 Days	Steep agar mm. 5 Days	Culture Temp.	Czapek agar mm. 5 Days	Czapek agar mm. 10 Days	Czapek agar mm. 20 Days	Strain No.	Texture	5–6 Days Depth μ	10–12 Days Depth μ	Character of Surface
	0		37° C		0		588.	Velutinous or Subfloccose	200–300 –400	300–400 –500	Radial Furrowed
	15		30° C		16						
30	22	15	25° C	14	18	20	S 〃	〃	200–400 –800	300–500 –1200	Slightly Furrowed
	0		37° C		0		708.	Floccose or Slightly Funiculose	150–200 –600	150–400 –700	Radiately Furrowed
	20		30° C		25						
29	25	16	25° C	16	27	38	S 〃	〃	150–500 –600	150–600 –800	〃
	0		37° C		0		602. 603. 604.	Velutinous or Slightly Floccose	100–200 –250–600	100–200 3–600	Smooth or Buckled, Radial Furrowed
	24–27		30° C		22–24						
53–57	26–28	12–13	25° C	9–10	22–24	55–61	S 〃	〃	100–200 –4–600	120–400 6–1000	〃
	0		37° C		0		1071.	Velvety	100–200 –300	100–300 –400	Buckled Sulcate, Radiately Furrowed
	22		30° C		25						
35	25	13	25° C	10	25	40	S 〃	〃	100–300 –600	100–300 –1300	〃
	0		37° C		0		329. 1140.	Typical Velvety	150–300 –7–800	200–350 –8–1200	Radiately Furrowed
	18–27		30° C		23–28						
54–55	30–32	15–18	25° C	13–16	25–28	48–50	S 〃	〃	150–300 –7–900	200–450 –9–1200	〃
	0		37° C		0		767.	Typical Velvety	100–600 –1000	150–600 –1200	Radiately Furrowed
	29		30° C		28						
39	25	22	25° C	22	25	33	S 〃	〃	200–600 –1100	200–700 1200	〃
	0		37° C		0		9.	Velutinous	200–800 –1000	200–1000 –1400	Buckled; Radiately Furrowed
	30		30° C		26						
40	32	14	25° C	10	27	37	S 〃	〃	400–1000 –1100	400–1000 –1300	〃
	11–12		37° C		7–12		623. 624.	Velvety	100–200 –250–300	100–200 –300 400	Buckled; Radiately Furrowed
	30–31		30° C		24–25						
43–45	28–29	10–11	25° C	7–8	23–24	36–38	S 〃	〃	100–250 –3–600	150–400 –6–1000	〃

Character of Margin	Colony Color and Color Change	Exudate	Colony Reverse	Pigmentation of Substratum
1.0 mm.: White	Pois Green or Vetiver Green —Grayish Olive	Lacking	Colorless	Colorless
〃	〃	〃	〃	〃
2.0 mm.: White	Light Paris Green or Pois Green —Parrot Green	Lacking	MA: Colorless CA: Deep Greenish Olive —MA: Colorless CA: Dark Grayish Olive	Colorless
〃	Vetiver Green —Andover Green	〃	〃	〃
0.5-1.0 mm.: White	Dark Bluish Glaucous or Deep Yellow Green — 〃 or Vetiver Green	Abundantly Small, Colorless	Colorless —MA: Colorless CA: Light Pinkish Cinnamon	Colorless
〃	〃	〃	〃	〃
0.3 mm.: White	MA: Light Elm Green CA: Dark Bluish Glaucous —MA: 〃 CA: Aspodel Green	Limited; Small, Colorless	Colorless CA: Slightly Olive — 〃	Colorless
〃	〃	〃	〃	〃
0.2 mm.: White	Dusky Yellowish Green or Dull Blackish Green — 〃 or Dark Ivy Green	Limitedly, Colorless	Colorless CA: Slightly Greenish Shades — 〃	Colorless
〃	〃	〃	〃	〃
0.5 mm.: White	Pea Green or Sage Green —Lincoln Green	Limitedly, Colorless	Vinaceous Buff — 〃	Colorless
〃	〃	〃	〃	〃
0.5-1.0 mm.: White	Dark American Green —Andover Green	Lacking	MA: Baryta Yellow CA: Warm Buff —Ochraceous Tawny	Colorless
〃	Dark Green —Andover Green	〃	〃	〃
0.2 mm.: White	MA: Dark Green CA: Dark Russian Green —MA: Dull Blackish Green CA: Deep Olive	Lacking	MA: Colorless CA: Drab. —MA: Pinkish Buff CA: Clove Brown	Colorless
〃	〃	〃	〃 CA: Natal Brown	〃

Table C-7 Colony characteristics of *Ramigena series*.

Rate of Growth											
Steep agar mm.			Culture Temp.	Czapek agar mm.			Strain No.	Texture	5–6 Days Depth	10–12 Days Depth	Character of Surface
20 Days	10 Days	5 Days		5 Days	10 Days	20 Days			μ	μ	
	0		37° C		0		564. 565.	Velvety or Floccose	100–200 –250	100–250 –300	Smooth Raised in Central Area
	17–18		30° C		12–18						
32	17–18	9	25° C	6–7	15–18	29–30	S 〃	〃	150–200 –300	150–250 –350	〃 or Radially Furrow
	0		37° C		0		741.	Velutinous or Sub-floccose	200–300 –400	200–350 –400	Radiately Furrowed. Raised in C.A.
	27		30° C		25						
32	27	10	25° C	10	25	30	S 〃	〃	200–400 –500	200–400 –500	〃
	0		37° C		0		831. 734.	Velvety or Sub-floccose	100–200 –5–800	100–300 –8–1300	Radiately Furrowed
	36–38		30° C		40–43						
63–64	45–48	23–25	25° C	20–23	49–52	60–67	S 〃	〃	150–250 –4–600	150–300 –4–1000	〃
	0		37° C		0		806.	Typical Velvety	150–200 –300	200–250 –400	Buckled, Raised in C.A. Radially Furrowed
	42		30° C		40						
55	44	20	25° C	19	39	53	S 〃	〃	150–180 –300	200–250 –400	〃
	0		37° C		0		1121.	Velutinous or Sub-floccose	200–400 –600	200–450 –1000	Loosely Radiately Furrowed
	45		30° C		43						
77	42		25° C	22	39	67	S 〃	〃	300–500 –1000	300–900 –1300	Smooth
	0		37° C		0		891.	Velutinous or Sub-floccose	300–700 –1000	300–700 –1200	Radiately Furrowed
	50		30° C		48						
73	51		25° C	27	50	70	S 〃	〃	300–800 –1200	300–800 –1500	〃

Character of Margin	Colony Color and Color Change	Exudate	Colony Reverse	Pigmentation of Substratum
0.2–0.5 mm.: White	Pistachio Green or Mytho Green —Lumiere Green or similar CA: Grayish Olive	Limited, Sulpur Yellow	MA: Apricot Yellow CA: Tawny Olive —English Red or Light Brownish Olive	9–15 mm.: Mars Yellow or Chamois —15–20 mm.: Orange Rufous
〃	〃	〃	English Red — 〃	Similar
0.2 mm.: White	Andover Green —Hair Brown	Limited, Uncolor	Uncolor or Pale Olive Buff —Light Grayish Olive	Colorless
〃	〃	〃	〃	〃
0.3–1.0 mm.: White	Dark American Green or Asphodel Green —Dark Dull Yellow Green or Empire Green	Lacking	MA: Colorless CA: Slate Olive —MA: Colorless or Tellel Buff. CA: Olivaceous Buff.	Colorless
〃	〃	〃	〃	〃
1.0 mm.: White	Dark Yellowish Green —Dusky Olive Green	Lacking	Pale Purplish Vinaceous —Light Cinnamon Drab.	Colorless
〃	〃	〃	〃	〃
1.5 mm.: White	Roman Green or Andover Green —MA: Deep Olive CA: Hair Brown	Limited, Colorless	Light Vinaceous Fawn —Light Grayish Vinaceous	Colorless
〃	〃	〃	Clay Color —Pinkish Cinnamon	〃
2.0 mm.: White	Grayish Olive or Andover Green —Similar	Lacking	Colonial Buff. —Kaiser Brown	Colorless
〃	〃	〃	〃 —Soyal Brown	〃

Table C-8 (1). Colony characteristics of *P. lilacinum and*

Rate of Growth: Steep agar mm. 20 Days	10 Days	5 Days	Culture Temp.	Czapek agar mm. 5 Days	10 Days	20 Days	Strain No.	Texture	5–6 Days Depth μ	10–12 Days Depth μ	Character of Surface
	0		37° C		0		1233. 1190. 1085.	Floccose	150–400 –6–700	200–500 –8–1400	Raised in C.A. or Shallow Radially Furrowed
	52–60		30° C		48–55		1308.				
68–80	47–60	22–33	25° C	21–25	41–55	62–75	S 〃	〃	200–400 –8 1300	200–500 –11–1800	〃
	0		37° C		0		1364.	Sub-floccose	150–350 –600	200–500 –900	Smooth
	45		30° C		42						
60	45	22	25° C	20	40	60	S 〃	〃	200–400 –800	250–450 –1000	Smooth
	0–23		37° C		0–22		1156. 1167. 860.	Velutinous or Sub-floccose	200–450 –6–800	200–600 10–1200	Radial Furrowed, Zonate
	48–74		30° C		48–62		1298. 1157.				
73–80	52–75	32–47	25° C	32–42	53–68	70–73	S 〃	〃	200–600 –17–1000	300–600 –10–1500	Broadly Furrowed
	13–19		37° C		8–12		1017. 894. 876.	Velutinous	220–500 –6–1100	250–700 –7–1300	Smooth or Broadly Radially Furrowed
	63–66		30° C		52–58		217. 216.				
70–75	58–63	32–42	25° C	28–31	48–58	68–72	S 〃	〃	300–500 –6–1200	300–600 –7–1300	〃
	3–30		37° C		3–28		1108.214. 302.1091. 687.1102.	Velutinous or Sub-floccose	200–600 –8–1200	200–600 –8–1200	Irregular or Radially Furrowed
	64–73		30° C		58–70						
70–80	50–80	30–42	25° C	21–37	51–74	65–76	S 〃	〃	300–700 –8–1200	300–700 –9–1400	Broadly Radial Furrowed
	8–9		37° C		7–8		900.1097. 680.1101. 1102.870. 861.875. 901.	Velutinous	300–500 –6–1000	300–600 –6–1400	Raised in C.A. Radial Furrowed
	50–54		30° C		38–47						
70–78	48–65	20–40	25° C	18–32	38–52	55–67	S 〃	〃	300–600 6 1200	300–600 –8–1400	〃
	10		37° C		10		900.	Velutinous	300–600 –1000	400–800 –1200	Radial Furrowed, Raised in C.A.
	45		30° C		40						
70	46	20	25° C	17	40	65	S 〃	〃	300–600 –1000	400–800 –1200	〃
	4–6		37° C		3–5		883. 542. 112.	Velutinous	200–400 –6–900	200–400 –6–900	Broadly Radial Furrowed
	66–72		30° C		64–66						
75–76	62–75	27–42	25° C	26–36	57–67	73–75	S 〃	〃	200–400 –6–900	200–450 –8–900	〃

P. janthinellum series.

Character of Margin	Colony Color and Color Change	Exudate	Colony Reverse	Pigmentation of Substratum
0.5–1.0 mm.: White	Light Congo Pink or Pale Vinceous Pink. — 〃	Lacking or Limited, Colorless	CA: Taupe Brown or Dark Perilla Purple MA: Vineceous —Blackish Red Purple or Deep Brownish Vinaceous	3–5 mm.: Pale Vinaceous Pink or Rocellin Purple —5–10 mm.: 〃 or Orange Pink.
〃	〃	〃	〃	〃
1.5 mm.: White	Vinaceous Drab— 〃	Lacking	Bright Greenish Yellow or Lemon Yellow — 〃	10–13 mm.: Lemon Yellow —25 mm.: 〃
1.5 mm.: White	〃	〃	Cadnium Yellow — 〃	〃
1.0–1.5 mm.: White	Reddish or Pinkish shades mycelium abundantly, Bice Green —Citrine Drab or Andover Green	Limited or Abundantly. Salmon Color or Antimony Yellow	CA: Violet Carmine or Blackish Red Purple MA: Cinnamon Buff. —Aniline Black. or Mars Violet.	0–10 mm.: Pinkish Buff. —Full: Ponpenian Red or purplish Vinaceous
〃	〃	〃	〃	〃
1.0–1.5 mm.: White	Russian Green or Nickel Green —CA: Deep Grayish Olive MA: Leaf Green or Rejane Green	Limited, Raw Sienna or Orange Citrine	CA: Blackish Red Purple MA: Light Ochraceous Salmon —Blackish Brown	8–10 mm.: Avellaneous —10 or Full: Kaiser Brown or Mars Yellow
〃	〃	〃	〃	〃
1.5–2.5 mm.: White	French or Dark Yellowish Green —CA: Dark Grayish Olive or Olive Brown MA: Leaf or Sage Green	Limited, or Abundantly, Raw Sienna	CA: Mars Violet or Bister or Mahogany Red MA: Mars Orange —Bay or Mars Violet	Colorless —5–10 mm.: Cinnamon Buff.
〃	〃	〃	〃	〃
1.5–2.0 mm.: White	Dark Yellowish Green or Sage Green —CA: Drab or Citrine Drab MA: Sage Green or Dark Ivy Green	Lacking or Limited, Colorless	CA: Blackish Red Purple (3–10 mm zone) MA: Mustard Yellow	Colorless.
〃	〃	〃	〃	〃
2.0 mm.: White	Pistachio Green —Grayish Olive	Abundantly, Colorless or Warm Buff	CA, MA: Pinkish Buff SCA: Hays Marron —SA, MA: Vinaceous Cinnamon SCA: Brick Red	Colorless.
〃	〃	〃	〃	〃
1.0 mm.: White	CA: Dark Ivy Green MA: Meadow Green —Dark Olive or Dark Grayish Olive	Lacking	CA: Sulphur Yellow MA: Light Ochraceous Buff.	Colorless.
〃	〃	〃	〃	〃

Table C-8 (2)

Rate of Growth: Steep agar mm. 20 Days	10 Days	5 Days	Culture Temp.	Czapek agar mm. 5 Days	10 Days	20 Days	Strain No.	Texture	5-6 Days Depth μ	10-12 Days Depth μ	Character of Surface
	4–10		37° C		3–7		768. 211.	Sub-floccose	300–600 –10–1200	300–700 –10–1400	Smooth or Radial Furrowed
	55–57		30° C		40–45						
60–73	43–70	16–30	25° C	15–30	46–54	60–72	S 〃	〃	300–600 –10–1300	300–700 –12–1800	Radial Furrowed
	4–21		37° C		4–8		828. 991. 1011.	Sub-floccose	300–500 –9–1200	300–500 –10–1200	Raised in GA. Radial Furrowed
	45–56		30° C		42–48						
69–73	46–54	30–32	25° C	23–30	41–43	60–67	S 〃	〃	300–600 –11–1300	300–800 –11–1400	〃
	0–4		37° C		0–4		1111. 678. 682. 534. 906.	Velutin-ous	250–400 –6–1000	300–500 –10–1500	Raised in CA. Radial Furrowed
	63–74		30° C		49–57						
72–78	55–70	24–42	25° C	23–34	48–57	65–73	S 〃	〃	300–400 –7–1000	300–600 –7–1500	〃
	0–5		37° C		0–4		880. 873. 504. 1107. 381.	Velvety or Sub-floccose	350–500 –7–1300	350–500 –8–1400	Smooth or Radialy Furrowed
	42–65		30° C		40–64						
70–77	52–67	21–45	25° C	18–33	37–57	65–75	S 〃	〃	400–600 –7–1500	400–700 –8–1500	Broadly Radial Furrowed
	0		37° C		0		711. 881.	Velvety or Velutin-ous	300–500 –600	300–500 –8–1000	Raised in CA. Radial Furrowed
	30–40		30° C		24–40						
70–75	40–43	13 18	25° C	11–13	38 40	55–68	S 〃	〃	300 500 –6–800	300–500 –8–1000	Broadly Radial Furrowed
	0		37° C		0		905.	Sub-floccose	400–800 –1000	400–900 –1200	Radial Furrowed
	30		30° C		26						
72	36	25	25° C	24	34	68	S 〃	〃	500–1000 –1400	500–1000 –1400	〃
	0–5		37° C		0–3		1116. 882. 908.	Velutin-ous	200–400 –9–1000	250–600 –9–1000	Broadly Radial Furrowed
	65–70		30° C		59–65						
73–75	63–68	29–33	25° C	25–26	54–61	66–73	S 〃	〃	200–500 –9–1200	300–600 –9–1200	〃

Character of Margin	Colony Color and Color Change	Exudate	Colony Reverse	Pigmentation of Substratum
1.0–2.0 mm.: White	Bluish Gray Green —MA: Bluish Gray Green CA: Deep Grayish Olive	Lacking	Primuline Yellow	Colorless
〃	〃	〃	〃	〃
1.0–3.0 mm.: White	American Green or Pistachio Green —Hair Brown or Grayish Olive	Lacking or Limited, Colorless	Yellow Ocher —Clay Color	〃
〃	〃 — Bronze Brown or Drab.	〃	〃	〃
1.5–2.5 mm.: White	MA: Deep Bluish Gray Green CA: Andover Green —Dark Ivy Green	〃	Capucine Buff or Light Ochraceous Buff —Honey Yellow or Pinkish Buff	〃
〃	〃	〃	〃	〃
1.0–2.0 mm.: White	Dark Yellowish Green —Andover Green	Lacking	Pale Yallow Orange —Capucine Buff	〃
〃	〃	〃	〃	〃
0.5–1.5 mm.: White	MA: Bluish Gray Green CA: Russian Green —MA: Dark Russian Green CA: Dark Grayish Olive	〃	Colorless or Massicot Yellow —Mustard Yellow	〃
〃	〃	〃	〃	〃
1.5 mm.: White	Roman Green or Pea Green —Citrine Drab	Limited, Colorless	Sulphur Yellow — 〃	〃
〃	〃	〃	〃	〃
1.5–2.0 mm.: White	American Green or Dark Yellowish Green —Drab or Dark Olive	Lacking	Amber Yellow or Wax Yellow —CA: Natal Brown MA: Sulphine Yellow	Colorless —10 mm.–Full: Amber Yellow
〃	〃	〃	〃	〃

Table C-9. Colony characteristics of the *P. canescens* and *P. nigricans series.*

Rate of Growth: Steep agar mm. 20 Days	10 Days	5 Days	Culture Temp.	Czapek agar mm. 5 Days	10 Days	20 Days	Strain No.	Texture	5–6 Days Depth μ	10–12 Days Depth μ	Character of Surface
	0		37° C		0		832.	Sub-floccose	100–250 –600	200–600 –800	Broadly Radial Furrowed
	73		30° C		70						
85	80	34	25° C	24	75	78	S 〃	〃	150–250 –600	200–600 –800	〃
	0		37° C		0		1489. 170.	Velutinous or Sub-floccose	200–500 –1000	200–800 –1200	Loosely Radially Furrowed
	25–27		30° C		24–26						
40–42	28	32	18–20	25° C	15–18	25–28	38–40	S 〃	〃	200–1000 –1200	200–1000 –1500	〃
	0		37° C		0		907. 884.	Velutinous or Sub-floccose	150–300 –6–800	250–800 –10–1300	Radial Furrowed
	46–48		30° C		35–45						
70–75	47–48	21–23	25° C	15–19	36–37	56–58	S 〃	〃	150–400 –6–800	250–800 –10–1300	〃
	0		37° C		0		770.	Sub-floccose	300–600 –1300	400–900 –1500	Raised in CA. Radial Furrowed
	45		30° C		42						
48	38	20	25° C	18	38	52	S 〃	〃	300–800 –1500	400–900 –1800	〃
	0		37° C		0		948.	Velvety	200–400 –500	200–500 –600	Radial Furrowed
	19		30° C		14						
47	26	14	25° C	12	22	40	S 〃	〃	200–400 –500	200–500 –600	〃
	0		37° C		0		536.	Sub-floccose	200–500 –800	300–700 –1000	Broadly Radial Furrowed
	40		30° C		33						
68	45	32	25° C	30	43	62	S 〃	〃	200–500 –900	200–700 –1200	〃
	0		37° C		0		581.	Velutinous	200–500 –800	300–900 –1100	Broady Radially Furrowed, Raised in CA.
	48		30° C		50						
60	52	31	25° C	30	51	55	S 〃	〃	200–600 –900	300–900 –1300	〃
	0		37° C		0		992.	Sub-floccose	300–700 –1000	300–700 –1300	Raised in CA. Radial Furrowed
	60		30° C		45						
70	59	26	25° C	24	52	67	S 〃	〃	300–800 –1200	300–800 –1700	〃

Character of Margin	Colony Color and Color Change	Exudate	Colony Reverse	Pigmentation of Substratum
3–4 mm.: Grayish White	MA: Bluish Gray Green CA: Dusky Yellowish Green —Dark Grayish Olive or Fuscous	Limited Colorless	(Pale Violet or Pale Hortense Violet in 5 to 6 days) CA: Russet Vianceous MA: Mustard Yellow —Cinnamon Rufous	10 mm.: Pale lilac — Full: Chamois
〃	〃	〃	〃	〃
0.5 mm.: White	Bluish Gray Green or Artmesia Green — 〃	Lacking	Vinaceous or Rufous —Ferruginous	10 mm.: Capucine Yellow — 〃
〃	〃	〃	〃	〃
1.0 mm White or Sulphur Yellow	Olive Green or Lincoln Green — Citrine Drab.	Lacking or Limited, Colorless	Maroon —Victoria Lake or Hay's Maroon	8–12 mm.: Pale Yellow Orange 10–15 mm.: Dragon Blood Red.
〃	〃	〃	〃	〃
1.0 mm.: White	Sage Green or Pea Green —MA: Pea Green CA: Tea Green	Lacking	Naphthalene Yellow —Colonial Buff	Colorless
〃	〃	〃	〃	〃
0.5 mm.: White	Dark Grayish Olive —Olivaceous Black	Abundantly, Colorless or Sulphur Yellow	Orange Rufous or Mars Orange — 〃 or Mahogany Red	12 mm.: Yellow Ocher —15 mm.: Ochraceous Orange
〃	〃	〃	〃	〃
1.0 mm.: White	MA: Celandine Green CA: Dark Ivy Green —MA: Tea Green CA: Dark Grayish Olive	Lacking	Sulphur Yellow — CA: Ochraceous Buff MA: Primuline Yellow	Colorless —5 mm.: Cream Buff.
2.0 mm.: White	Slate Olive —Dark Grayish Olive	〃	〃 — Tawny Olive	〃
1.5 mm.: White	Andover Green —Light Grayish Olive or Grayish Olive (Quickly)	Abundantly, Antimony Yellow	Wax Yallow — 〃	10 mm.: Wax Yellow —15 mm.: 〃
2.5 mm.: White	〃	〃	〃	〃
2.0 mm.: White	Lincoln Green —Grayish Olive (Quickly)	Abundantly Sulphur Yellow	Sulphur Yellow —CA: Clove Brown MA: Avellaneous	Colorless
〃	〃	〃	〃	〃

Table C-10. (1) Colony characteristics of the *P. citrinum series.*

Rate of Growth: Steep agar mm. 20 Days	10 Days	5 Days	Culture Temp.	Czapek agar mm. 5 Days	10 Days	20 Days	Strain No.	Texture	5–6 Days Depth μ	10–12 Days Depth μ	Character of Surface
	0		37° C		0		517. 251. 972. 219.	Typically Velvety	100–300 –4–700	100–400 –5–900	Radially Furrowed
	41–47		30° C		35–46		1131. 1039.				
60–72	37–46	17–22	25° C	17 21	32–40	58 66	S 〃	〃	150–400 –6–700	200–400 –6–900	〃
	0		37° C		0		513. 116. 696.	〃	100–200 –3–400	120–300 –4–600	〃
	43–54		30° C		28–47		600. 607.				
62–76	45–55	19–23	25° C	16–21	36–47	41–66	S 〃	〃	100–200 –3–500	150–300 –4–500	〃
	0		37° C		0		512. 518. 1275.	〃	100–200 –250–300	100–300 –4–600	〃
	48–58		30° C		39–50		523.				
67–75	46–52	16–31	25° C	12–21	33–46	54–73	S 〃	〃	100–200 –3–500	150–300 –4–700	〃
	0		37° C		0		537. 540. 556. 608.	〃	100–200 –2–300	150–300 –3–350	Smooth
	60–62		30° C		48–58		93. 134.				
67–72	47–57	22–27	25° C	17–21	43–48	61–66	S 〃	〃	100–200 –25–300	150–300 –380	Brady Radial Furrowed
	0		37° C		0		801. 254.	〃	150–300 –6–700	200–400 –6–700	Smooth
	45–56		30° C		43–54		821.				
73–75	48–54	22–28	25° C	13–20	36–48	70–73	S 〃	〃	150–300 –6–700	200–400 –6–800	Broadly Radially Furrowed
	0		37° C		0		538.541. 361.073. 975.	〃	120–250 –3–400	150–300 –350–500	Slightly Furrowed
	49–64		30° C		42–53		332. 333.				
70–74	44–55	21–30	25° C	17–26	43–48	61–70	S 〃	〃	150–300 –350–400	180–300 –4–500	Radial Furrowed
	0		37° C		0		509. 105. 510.	〃	100–250 –3–350	150–300 4–500	Sinuously Furrowed
	40–45		30° C		36–40		511. 98.				
65–70	42–47	22–27	25° C	17–20	33–41	63–67	S 〃	〃	100–300 –4–600	150–300 –4–600	〃
	0		37° C		0		714. 713. 805. 802.	〃	100–250 –5–600	150–400 –5–800	Shallow Radial Furrowed
	30–44		30° C		30–34		181, 717.				
52–73	30–43	19–25	25° C	18–22	30–37	57–70	S 〃	〃	150–300 –5–600	150–400 –5–1000	〃

Character of Margin	Colony Color and Color Change	Exudate	Colony Reverse	Pigmentation of Substratum
0.2–0.5 mm.: White	Artmesia Green or Bluish Gray Green —Andover Green or Dusky Olive Green	Limited, or Abundantly, Light Greenish Yellow	Light Greenish Yellow or Picric Yellow —Orange Rufous or Cinnamon Rufous	10–18 mm.: Pale or Light Greenish Yellow Full: 〃
〃	〃	〃	〃	〃
0.2–0.5 mm.: White	Dark Ivy Green —Deep Slate Olive or Olivaceous Black	Limited, Colorless or Sulphur Yellow	Sulphur Yellow or Pale Greenish Yellow —Buckthorn Brown	5–10 mm.: Sulphur Yellow —Full: 〃 or Pale Orange Yellow
0.5–0.8 mm.: White	〃 — or Hair Brown	〃	〃	〃
0.2–1.0 mm.: White	American Green or Bluish Gray Green —Deep Grayish Olive	Limited, Sulphur Yellow	Ochraceous Buff or Colorial Buff — 〃 or Vinaceous Rufous	20–Full: Pinkish Cinnamon —Full: 〃 or Mars Orange
0.5–2.0 mm.: White	〃	〃	〃	〃
0.5–1.0 mm.: White	Dusky Yellowish Green or Dull Blackish Green —Dark Ivy Green	Lacking	Light Greenish Yellow —Mars Yellow or Xanthine Orange	15–20 mm.: Light Greenish Yellow —Full: Mars Yellow or Vinaceous Rufous
〃	〃	〃	〃	〃
0.5–2.0 mm.: White	American Green or Dark American Green —Andover Green or Leaf Green	Lacking or Limited, Sulphur Yellow	Sulphur Yellow —MA: Mustard Yellow CA: Avellaneous	5–10 mm.: Sulphur Yellow —Full: Maize Yellow (Slant: Light Greenish Yellow)
0.8–2.0 mm.: White	〃	〃	〃	〃
0.5 1.2 mm.: White	Dusky Yellowish Green or Darky Green —Slate Olive	Lacking	Colonial Buff or Cream Buff —Chamois or Isabella Color.	Colorless —Full: Colonial Buff. (Slant: Light Greenish Yellow)
〃	〃	Limited, Sulphur Yellow	〃	〃
0.3–0.5 mm.: White	MA: American Green CA: Andover Green —MA: Dark Ivy Green CA: Olive Brown or Light Drab.	Limited, Colorless	Colorless or Sulphur Yellow — 〃 or Olive Buff	Colorless
〃	〃	〃	〃	〃
0.3–0.5 mm.: White	MA: Pea Green CA: Dark Ivy Green —Chaetura Drab or Hair Brown	Lacking or Limited, Colorless	Colorless or Ivory Yellow — 〃 or Grayish Olive	〃
〃	〃	〃	〃	〃

Table C-10. (2)

Rate of Growth							Strain No.	Texture	5–6 Days Depth μ	10–12 Days Depth μ	Character of Surface
Steep agar mm.			Culture Temp.	Czapek agar mm.							
20 Days	10 Days	5 Days		5 Days	10 Days	20 Days					
	0		37° C		0		715. 716. 1040.	Velvety or Velutinous	100–200 –4–600	100–300 –4–800	Radial Furrowed, Sulcate
	34–54		30° C		32–48		1063.				
52–73	33–54	17–26	25° C	14–23	26–42	42–67	S 〃	〃	100–300 –4–600	100–300 –4–800	〃
	0		37° C		0		979. 986. 935.	Typically Velvety	100–300 –350–400	100–300 –400	Slightly Radial Furrowed
	40–52		30° C		39–47						
64–70	36–43	17–20	25° C	15–17	35–38	60–67	S 〃	〃	100–300 –4–700	100–300 –5–700	〃
	0		37° C		0		319. 320.	〃	100–200 –4–500	100–450 –6–700	Smooth
	28–40		30° C		36–43						
64–66	45–53	14–16	25° C	15–17	47–49	63–68	S 〃	〃	150–300 –6–800	150–450 –10–1000	Loosely Radial Furrowed
	0		37° C		0		706. 595. 644.	〃	200–400 –7–1000	200–500 –7–1000	Smooth or slightly Radial Furrowed
	33–40		30° C		32–33						
57–70	40–44	18–21	25° C	13–17	34–36	52–62	S 〃	〃	200–400 –8–1000	200–500 –9–000	Shallow Radial Furrowed
	0		37° C		0		1090. 1041.	Velutinous or Subfloccose	200–500 –8–900	300–600 –10–1400	Typically Radial Furrowed
	30–57		30° C		31–45						
72–75	48–67	24–38	25° C	17–30	43–47	62–65	S 〃	〃	250–500 –9–1000	300–600 –10–1400	〃
	0		37° C		0		306. 984. 862. 308.	Typically Velvety	150–300 –6–800	150–300 –10–1200	Smooth or slightly Furrowed
	28–42		30° C		19–34						
67–72	34–43	15–18	25° C	12–16	27–32	60–67	S 〃	〃	150–300 –8–1000	150–400 –11–1400	Broady Radialy Furrowed
	0		37° C		0		1286.	Velvety	200–300 –500	200–400 –700	Radial Furrowed
	34		30° C		22						
48	35	20	25° C	16	30	47	S 〃	〃	250–300 –500	250–400 –500	〃

Character of Margin	Colony Color and Color Change	Exudate	Colony Reverse	Pigmentation of Substratum
0.3–1.0 mm.: White	Leaf Green or Sage Green — 〃 or Andover Green	Lacking or Limited, Colorless	Cinnamon or Naples Yellow —Avellaneous or Army Brown	Colorless
〃	〃	〃	Verona Brown —Chestnut	〃
0.5–0.8 mm.: White	Pistachio Green or Dusky Yellow Green —Dark Olive or Dusky Olive Green	Lacking	Sulphur Yellow — 〃 or Olive Buff	Lacking
〃	〃	〃	〃	〃
1.0 mm.: White	Empire Green —Cress Green	〃	Cream Buff —CA: Dark Greenish Olive MA: Sepia (Koji-agar: Dusky Olive Green)	〃
〃	Empire Green —Danube Green	〃	Yellowish Olive — 〃	〃
0.3–0.8 mm.: White	MA: Greenish Glaucous Blue CA: Andover Green —Light Drab or Olive Brown	Limited or Abundantly, Antimony Yellow	Cocao Brown or Ochraceous Salmon —Cacao Brown or Cameo Brown	5–12 mm.: Warm Buff —Full: Pinkish Cinnamon
〃	〃	〃	〃	〃
0.8–1.0 mm.: White	Dark Greenish Glaucous or Pistachio Green —Dark Dull Yellow Green	Abundantly, Colonial Buff.	Ferruginose or Onion-Skin-Pink, —Cacao Brown or Pecan Brown	3–10 mm.: Warm Buff —Full: Pinkish Cinnamon
〃	〃 — Andover Green	〃	〃	〃
0.2–0.3 mm.: White	Dark Greenish Glaucous or American Green or Pistachio Green —Dusky Olive Green or Andover Green	Limited or Abundantly Colorless	Colorless or Sulphur Yellow — 〃 or Deep Olive Buff	Colorless
0.3–1.2 mm.: White	— 〃 or Deep Grayish Olive	〃	〃	〃
0.2 mm.: White	Pea Green or Sage Green —Andover Green	Limited Uncolor	Colonial Buff —Chamois	〃
0.5 mm.:	〃	〃	〃	〃

Table C-11 (1). Colony characteristics of the *P. chrysogenum series*.

Rate of Growth: Steep agar mm. 20 Days	Steep agar mm. 10 Days	Steep agar mm. 5 Days	Culture Temp.	Czapek agar mm. 5 Days	Czapek agar mm. 10 Days	Czapek agar mm. 20 Days	Strain No.	Texture	5–6 Days Depth μ	10–12 Days Depth μ	Character of Surface
	0		37° C		0		1054. 917.	Velutinous or Subfloccose	500–700 –10–1300	700–1200 –13–1900	Slightly Radial Furrowed
	45–53		30° C		27–40						
74–75	57–60	31–32	25° C	23–28	47–48	63–65	S 〃	〃	700–1000 –12–1400	700–1300 –17–2000	Typical Radial Furrowed
	0		37° C		0		1020. 349. 514.	Velvety or Velutinous	300–500 –7–1000	300–600 –7–1300	Typical Radial Furrowed
	53–59		30° C		40–47						
68–75	57–67	32–47	25° C	19–40	48–53	60–66	S 〃	〃	300–600 9–1100	300–700 –11–1300	〃
	0		37° C		0		914. 533. 508.	〃	100–300 –5–800	200–400 –7–1400	Lightly or Conspicuous Radial Furrowed
	46–53		30° C		37–45		1265.				
68–71	54–68	30–48	25° C	22–38	37–58	46–61	S 〃	〃	100–300 –6–1000	250–400 –7–1500	〃
	0		37° C		0		338.854. 544.506. 855.	Velutinous	300–800 –10–1200	300–800 –12–1500	Smooth or Slightly Furrowed in CA.
	50–53		30° C		42–55		919. 853. 700.				
71–80	56–73	30–43	25° C	25–39	52–70	66–73	S 〃	〃	300–800 –10–1400	300–800 13–1500	Shallow Radial Furrowed
	0		37° C		0		515.	Velvety	300–600 –1000	400–800 –1200	Conspicuous Radial Furrowed
	54		30° C		44						
72	60	48	25° C	45	57	63	S 〃	〃	350–700 –1100	400–800 –1200	〃
	0		37° C		0		1222.	Velutinous	300–400 –900	350–600 –1300	Radial Furrowed
	60		30° C		48						
73	70	36	25° C	30	56	60	S 〃	〃	400–600 –1200	400–800 –1400	〃
	0		37° C		0		525.652. 803.823. 1013.	Velvety or Subfloccose	250–500 –7–1000	300–500 –7–1500	Smooth or Zonate
	47–62		30° C		38–48		1255. 1259. 930.				
70–77	54–68	24–40	25° C	13–28	41–50	65–70	S 〃	〃	250–600 –7–1300	300–600 –10–1800	〃

Character of Margin	Colony Color and Color Change	Exudate	Colony Reverse	Pigmentation of Substratum
1.2–3.0 mm.: White	MA: American Green CA: Bluish Gray Green —Dark Porcelain Green	Abundantly, Sulphur Yellow or Light Greenish Yellow	Pale Greenish Yellow —Light Greenish Yellow	5–8 mm.: Pale Greenish Yellow —Full: 〃
1.5–3.0 mm.: White	〃	〃	Wax Yellow —Light Greenish Yellow	〃 Light Greenish Yellow —Full: 〃
1.0–2.5 mm.: White	Dark Yellowish Green or Dark American Green	Abundantly, Light Greenish Yellow	CA: Old Gold or Dresden Brown MA: Pale Greenish Yollow — 〃	6–1.5 mm.: Sulphur or pale Greenish Yellow —Full: Light Greeish Yellow
〃	〃	〃	〃	〃
0.8–1.5 mm.: White	Deep Bluish Gray Green or Dusky Dull Green or Nickel Green —Andover Green or Artmesia Green	Limited or Abundantly, Light Greenish Yellow	CA: Buckthorn Brown MA: Light Greenish Yellow —Raw Siennam or Brownish Olive	10–20 mm.: Light Greenish Yellow —Full: 〃
〃	〃	〃	〃	〃
1.2–2.0 mm.: White	Dark Porcelain Green or Dark Russian Green —Lily Green	Limited or Abundantly, Colorless, Sulphur Yellow	Pale or Light Greenish Yellow or Empire Yellow — 〃	10 Full: Pale Greenish Yellow —Full: Light Greenish Yellow
〃	〃	〃	〃	〃
2.0 mm.: White	Cinnamon Buff	Abundantly, Pinkish Cinnamon or Light Greenish Yellow	CA: Mars Yellow MA: Apricot Yellow —Verona Brown	Full: Light Greenish Yellow — 〃
〃	〃	〃	〃	〃
1.1 mm.: White	Dark Green or Dark American Green — 〃 or Dark Dull Yellow Green	Abundantly, Colorless	Wood Brown — Rood's Brown	Colorless
〃	〃	〃	〃	〃
1.0–1.5 mm.: White	MA: Bluish Gray Green or Russian Green CA: Andover Green or 〃 —Andover Green or Vetiver Green	Lacking or Limited, Colorless	Colonial Buff or Maize Yellow —Cinnamon Buff	Colorless
〃	〃 —Olive Brown	〃	Tawny —Verona Brown	〃

Table C-11 (2).

Rate of Growth: Steep agar mm. 20 Days	10 Days	5 Days	Culture Temp.	Czapek agar mm. 5 Days	10 Days	20 Days	Strain No.	Texture	5–6 Days Depth μ	10–12 Days Depth μ	Character of Surface
	0		37° C		0		1079. 577. 578.	Velvety	160–250 –3–350	160–250 –350–400	Typical Radial Furrowed
	63–65		30° C		55–59						
75–76	76–70	24–30	25° C	21–29	66–70	70–72	S 〃	〃	160–250 –3–350	160–500 –350–400	〃
	0		37° C		0		528. 532. 530. 918. 993. 963.	Velvety or Velutinous	200–400 –5–900	250–500 –8–1000	Conspicuous Radial Furrowed
	47–62		30° C		40–52		529. 857.				
64–78	54–70	27–34	25° C	26–30	42–62	60–68	S 〃	〃	200–400 –7–900	250–600 –8–1200	〃
	0		37° C		0		612. 616. 574.	Velvety or Velutinous	200–400 –6–800	300–400 –6–1200	Typical Radialy Furrowed
	47–49		30° C		43–47		522. 519. 865.				
68–72	58–66	20–35	25° C	18–28	46–58	58–65	S 〃	〃	200–400 –6–1000	300–500 –8–1200	〃
	0		37° C		0		520. 618. 579. 350. 980. 547.	Velvety or Velutinous	200–300 –5–1100	200–500 –8–1200	Conspicuous Radial Furrowed
	41–56		30° C		32–47		545.				
69–75	48–67	20–40	25° C	16–30	39–57	58–63	S 〃	〃	200–300 –7–1200	250–500 –9–1300	〃
	0		37° C		0		580. 653. 699.	Velutinous or Subfloccose	300–500 –10–1200	350–900 –11–1500	Typical, Radial Furrowed
	51–55		30° C		50–52						
73–74	59–63	21–31	25° C	18–21	58–68	70–75	S 〃	〃	300–500 –10–1300	350–900 –13–1500	〃
	0		37° C		0		573. 697. 596. 586.	Velvety or Velutinous	300–500 –6–1000	400–700 –8–1500	Typical Radial Furrowed
	55–61		30° C		40–45						
67–69	55–63	19–30	25° C	17–22	48–50	60–64	S 〃	〃	300–500 –6–1000	400–700 –9–1600	〃
	0		37° C		0		1130. 539.	Velvety	200–300 –6–700	200–350 –700	Typical Radial Furrowed
	47–61		30° C		42–58						
66–75	54–60	27–30	25° C	23–26	50–57	58–66	S 〃	〃	–6–700	–7–800	〃

Character of Margin	Colony Color and Color Change	Exudate	Colony Reverse	Pigmentation of Substratum
2.0 mm.: White	MA: Hay's Green or Winter Green CA: Pale Olive Buff —Avellaneous or Fawn Color	Limited, Pale Green Yellow	CA: Old Gold MA: Pale Lemon Yellow —Light Ochraceous Buff	Full: Picric Yellow — 〃
〃	〃	〃	〃	〃
1.0–2.0 mm.: White	MA: Celandine Green, Sage Green CA: Deep Bluish Gray Green —Artmesi Green or Slale Olive	Abundantly, large or small; Yellow	Light Greenish Yellow — 〃	10 mm.—Full: Pale or Light Greenish Yellow —Full: 〃
〃	〃	〃	〃	〃
1.0–1.5 mm.: White	MA: Dark Russian Green or Dark Yellowish Green CA: Andover Green, Tea Green	〃	CA: Clay Color MA: Light Greenish Yellow — 〃	〃
〃	〃	〃	〃	〃
1.0–1.5 mm.: White	MA: Bluish Gray Green CA: Artmesia Green —Andover Green or Lily Green	〃	CA: Buckthorn Brown MA: Pale or Light Greenish Yellow —Snaff Brown or Tawny Olive	〃
〃	〃	〃	〃	〃
1.0–1.5 mm.: White	MA: Deep Bluish Glaucous CA: American Green —Deep Dull Yellow Green	Abundantly, Colorless	CA: Hays's Brown MA: Colorless —Army Brown	Colorless
〃	〃	〃	〃	〃
1.0–1.2 mm.: White	Artmesia Green or Lily Green — 〃	〃	CA: Light Brownish Olive MA: Deep Colonial Buff —Verona Brown	〃
〃	〃	〃	〃	〃
1.5 mm.: White	Dark Yellowish Green or Antique Green — 〃 or Andover Green	Abundantly, or Limited Colorless	Cinnamon Buff —Verona Brown	〃
〃	French Green or Danube Green —Lily Green	〃	〃	〃

Table C-12. Colony characteristics of the *P. oxalicum* and *P. digitatum series*.

Rate of Growth											
Steep agar mm.			Culture Temp.	Czapek agar mm.			Strain No.	Texture	5–6 Days Depth	10–12 Days Depth	Character of Surface
20 Days	10 Days	5 Days		5 Days	10 Days	20 Days			μ	μ	
	50–60		37° C		44–65		265. 258. 630.	Velvety or Velutinous	200–400 –6–700	250–500 8–1100	Smooth or Plane
	75–80		30° C		74–80		1134.				
80–83	80–83	33–40	25° C	20–35	77–80	80–83	S 〃	〃	300–500 –6–700	350–700 –11–1400	〃
	10–22		37° C		6–22		1180. 1119. 524.	〃	200–300 –4–700	250–500 7–800	〃
	76–78		30° C		71–73		160.				
80–83	78–80	38–55	25° C	26–45	61–78	76–83	S 〃	〃	300–400 –5–700	300–500 –8–900	〃
	27–33		37° C		19–23		834. 825.	〃	300–500 –7–800	400–800 –8–900	〃
	75–83		30° C		75–80		1026.				
80–85	80–85	26–30	25° C	20–27	75–83	80–85	S 〃	〃	400–700 –10–1100	400–800 –11–1200	〃
	0		37° C		0		1284.	Velvety	150–250 –500	150–300 –600	Typically Radial Furrowed
	55		30° C		45						
65	54	22	25° C	22	46	63	S 〃	〃	200–350 –550	200–400 –600	〃
	0		37° C		0		1331.	〃	30–50 –70	40–70 –80	Plane Sparsely
	60		30° C		25						
75	65	35	25° C	10	30	35	S 〃	〃	100–250 –350	190–300 –440	Smooth
	0		37° C		0		605.	Velutinous	200–400 –800	200–500 –1000	〃
	70		30° C		50						
70	78	24	25° C	17	65	70	S 〃	〃	300–600 –800	300–600 –1000	〃

Character of Margin	Colony Color and Color Change	Exudate	Colony Reverse	Pigmentation of Substratum
1.0–2.0 mm.: White or Grayish White	Dusky Olive Green — 〃 or Dark Ivy Green	Lacking or Abundantly, Colorless	Strontian Yellow or Primrose Yellow — 〃 or Wax Yellow	Colorless —3–5 mm.: Sulphur Yellow
〃	Olivaceous Black —Dark Ivy Green	〃	〃	〃
1.5–2.0 mm.: White or Pale Yellow Green	Dull Blackish Green —Dusky Olive Green	〃	CA: Dark Ivy Green or Pois Green MA: Primrose Yellow —Reed Yellow	Colorless —3–5 mm.: Massicot Yellow
〃	Dusky Olive Green — 〃	〃	〃 — Isabella Color	〃
1.5–1.7 mm.: Orange Pink	Dusky Yellowish Green —Dusky Olive Green	〃	CA: Oil Yellow or Sulphine Yellow MA: Orange or Capucine Yellow —Red Yellow or Cinnamon	Colorless — 〃 or 3–5 mm.: Massicot Yellow
〃	〃	〃	〃	〃
1.5 mm.: White	MA: Light Danube Green CA: Antique Green —Drab or Light Grayish Olive	Limited, Bitter Sweet Pink	Bitter Sweet Pink —Grnadine	Colorless —5 mm.: Orange Pink
〃	〃	〃	〃	〃
1.0–1.5 mm.: White	Vetiver Green — 〃	Lacking	Colorless — 〃 or Dark Olive Buff	Colorless
1.0 mm.: White	〃 — Dark Olive Buff	〃	〃	〃
1.2 mm.: White, Thin	MA: Greenish Glaucous Blue CA: Dark Russian Green —Sage Green	〃	CA: Deep Colonial Buff MA: Seafoam Yellow —Light Green Yellow	〃
2 4 mm.: White	〃 — Celandine Green	〃	CA: Hessian Brown MA: Honey Yellow 〃	〃

Table C-13. Colony characteristics of the *P. roqueforti series*.

Rate of Growth: Steep agar mm. 20 Days	10 Days	5 Days	Culture Temp.	Czapek agar mm. 5 Days	10 Days	20 Days	Strain No.	Texture	5–6 Days Depth μ	10–12 Days Depth μ	Character of Surface
	0		37° C		0		731. 733. 1136. 1000.	Velvety	100–200 –250	100–200 –300	Smooth or Plane
	30–40		30° C		50–53						
60–63	40–42	28–30	25° C	31–32	54–57	64–68	S 〃	〃	150–250 –400	150–300 –500	Typical Radial Furrowed
	0		37° C		0		1257. 1260. 1258. 1253.	Velvety or Velutinous	200–400 –4–600	200–400 –5–600	Plane
	50–54		30° C		53–60						
84–86	79–81	35–48	25° C	28–35	72–76	75–78	S 〃	〃	300–400 –10–1200	300–400 –11–1200	〃
	0		37° C		0		42. 542.	Velutinous	500–700 –800	500–700 –800	Plane
	66–68		30° C		60–67						
86–88	73–80	40–45	25° C	28–46	65–75	75–80	S 〃	〃	600–800 –10–1100	800–1100 –11–1200	〃
	0		37° C		0		1271.	Velvety	150–300 –500	200–350 –700	Slightly Radial Furrowed
	35		30° C		32						
64	53	25	25° C	18	46	59	S 〃	〃	200–400 –800	200–400 –1000	Irregular Furrowed
	0		37° C		0		314. 315.	Velutinous	300–400 –1000	350–450 –1300	Slightly Furrowed in MA
	35–37		30° C		32–37						
66–70	58–67	32–33	25° C	30–32	58–62	66–67	S 〃	〃	400–600 –1400	400–600 –1500	Typical Radially Furrowed
	2–10		37° C		2–13		817. 1046. 1030. 915.	Velvety or Velutinous	200–300 –5–800	200–400 –10–1200	Typically Radial Furrowed
	30–54		30° C		24–53						
65–72	43–70	23–27	25° C	20–23	40–66	45–68	S 〃	〃	200–350 –7–1000	200–450 –9–1100	Circumference Rugged
	0		37° C		0		1276.	Velvety	150–300 –600	150–400 –1000	Typically Radially Furrowed
	20		30° C		17						
63	35	18	25° C	15	34	58	S 〃	〃	150–300 –800	150–400 –1000	〃
	0		37° C		0		317. 1166.	〃	150–300 –1000	150–500 –1000	Typical Radially Furrowed
	40–42		30° C		37–40						
70–75	60–64	32–33	25° C	28–30	53–55	66–70	S 〃	〃	150–450 –6–700	200–600 –10–1100	〃

Character of Margin	Colony Color and Color Change	Exudate	Colony Reverse	Pigmentation of Substratum
2.5–3.0 mm.: White; thine Arachinoid	Ackermann's Green or Medow Green —Dark Ivy Green	Lacking	CA: Dusky Olive Green MA: Pea Green —Chaetura Drab or Fuscous	Colorless
0.5 mm.: White	Danube Green or Varley's Green —Dusky Olive Green	〃	〃	〃
2.0–3.0 mm.: Thin, White	Dark Yellowish Green —Dark Cress Green	〃	Colorless — 〃 or Light Grayish Olive	〃
〃	Dark Russian Green —Deep Olive	Limited, Colorless	Clay Color — 〃	〃
1.0–2.0 mm.: White	Dark Yellowish Green or Winter Green —Olive Brown or Dark Olive	Abundantly, Colorless	Pinkish Buff —Light Ochraceous Buff	〃
〃	Russian Green —Olive Brown	〃	Clay Color — 〃	〃
1.0 mm.: White	Sage Green or Pea Green —Drab	Lacking	Colorless	〃
〃	〃	〃	〃	〃
1.2 mm.: White	Deep Dull Yellow Green — 〃 or Citrine Drab	Abundantly, Colorless	Colorless —Avellaneous	〃
〃	French Green or Empire Green —Yellowish Olive	〃	Cinnamon —Soyal Brown	〃
0.5–1.5 mm.: White	Dark Dull Yellow Green or Danube Green —Yew Green or leaf Green	Abundantly, Colorless or Sulphur Yellow	Wax Yellow —Sulphine Yellow or Amber Brown	10–15 mm.: Pinkish Buff or Light Pinkish Cinnamon —Full: 〃
0.8–1.0 mm.: White	Empire Green —Dusky Olive Green	〃	〃	〃
0.3–0.5 mm.: White	MA: Meadow Green CA: Dark Yellowish Green —MA: Stone Green CA: Andover Green	Abundantly, Massicot Yellow	Light Ochraceous Buff —Vinaceum Pink	8 mm.: Milky White —12 mm.: 〃
〃	〃	〃	〃	〃
0.5–1.2 mm.: White	Winter Green —MA: Hay's Green CA: Light Drab	Limited, Colorless	Colorless or Primurose Yellow —Cartridge Buff	Colorless
〃	〃 —Deep Grayish Olive	〃	〃	〃

Table C-14. Colony characteristic of the *P. brevi-compactum series.*

Rate of Growth							Strain No.	Texture	5–6 Days Depth	10–12 Days Depth	Character of Surface
Steep agar mm.			Culture	Czapek agar mm.							
20 Days	10 Days	5 Days	Temp.	5 Days	10 Days	20 Days			μ	μ	
	0		37° C		0						
							1285.	Velvety	200–400 –500	300–500 –800	Lightly Wrinkled
	25		30° C		32						
35	28	12	25° C	8	29	40	S 〃	〃	300–500 –800	400–700 –800	〃
	0		37° C		0		684. 815.	Velvety	200–300 –6–1000	200–300 –6–1100	Strongly or Lightly Furrowed; Circum-ference Rugged
	35–40		30° C		35–48		1202.				
45–60	43–44	21–22	25° C	20–24	42–51	64–68	S 〃	〃	250–400 –7–800	250–500 –8–1000	〃
	0		37° C		0		507. 90.	Velvety	200–350 –6–700	200–350 –7–800	Smooth; Circum-ference Smooth
	35–37		30° C		28–30						
70–72	46–48	38–40	25° C	36–39	53–54	62–66	S 〃	〃	250–400 –7–800	300–450 –8–900	Strongly Radial Furrowed
	0		37° C		0		709.	Velvety	200–300 –500	250–300 –600	Strongly Furrowed; Circum-ference Rugged
	23		30° C		34						
58	33	17	25° C	13	35	53	S 〃	〃	300–450 –600	300–450 –600	Strongly Radial Furrowed
	0		37° C		0		1132.	Velvety	200–300 –350	200–350 –800	Strongly Furrowed; Circum-ference Slightly Rugged
	28		30° C		26						
70	44	22	25° C	24	46	62	S 〃	〃	240–300 –400	250–400 –800	〃

Character of Margin	Colony Color and Color Change	Exudate	Colony Reverse	Pigmentation of Substratum
1.0 mm.: White	MA: Pea Green CA: Sage Green —Leaf Green	Limited, Yellow Ocher or Raw Sienna	CA: Yellow Ocher MA: Buff Yellow —Primuline Yellow	10 mm.: Sulphur Yellow —Full: Pale Green Yellow
0.3 mm.:	〃	〃	Yellow Ocher — 〃	〃
1.0–1.5 mm.: White Stolon-like	Deep Dull Yellow Green or Empire Green —Vetiver Green or Citrine Drab	Limited Sulphur Yellow	Dark Olive Buff —Dark or Deep Olive Buff	Colorless or 10 mm. Sulphur Yellow —Full: Sulphur Yellow
〃	〃 —Brownish Olive or Deep Olive	〃	〃	〃
1.0 mm.: White Stolon-like	Leaf Green —Light Drab	Lacking	Sulphur Yellow —Chamois	Colorless —Full: Pale Greenish Yellow
0.3 mm.:	〃	〃	Old Gold — 〃	〃
0.5 mm.: White Not Stolon-like	Leaf Green —Deep Olive	〃	Buffy Citrine —CA: Olive MA: Light Brownish Olive	10 mm.: Cream Buff —Full: Straw Yellow
〃	〃 —Grayish Olive	〃	〃	〃
1.0 mm.: White	Buckthorn Brown or Clay Color —MA: Verona Brown CA: Sayal Brown	〃	Antimony Yellow or Cinnamon —CA: Soyal Brown MA: Yellow Ocher	13 mm.: Warm Buff —Full: Naples Yellow
〃	〃	〃	〃	〃 —Full: Yellow Ocher

Table C-15. (1) Colony characteristics of the *P. ochraceum*, *P. crustosum*,

Rate of Growth: Steep agar mm. 20 Days	Steep agar mm. 10 Days	Steep agar mm. 5 Days	Culture Temp.	Czapek agar mm. 5 Days	Czapek agar mm. 10 Days	Czapek agar mm. 20 Days	Strain No.	Texture	5–6 Days Depth μ	10–12 Days Depth μ	Character of Surface
	0		37° C		0		766.	Fascicle or Velutinous	200–400 –600	200–400 –800	Radial Furrowed
	40		30° C		40						
67	43	14	25° C	15	45	70	S 〃	〃	200–500 –800	300–700 –1000	〃
	0		37° C		0		703. 735. 1133.	Fasciculate	150–400 –6–1000	150–500 –7–1100	Smooth or Radial Furrowed
	23–60		30° C		20 47		325. 371. 584. 593. 589.				
56–77	38–72	23–31	25° C	16–26	49–62	62–70	S 〃	〃	150–500 –5–1100	150–500 –7–1200	〃
	0		37° C		0		1058. 1205. 218. 847. 553. 1227.	〃	200–500 –8–1100	200–600 –8–1200	Smooth or Slightly Furrowed in CA
	50–62		30° C		38–53		143. 1303. 318. 705. 1081.				
73–78	63–75	27–50	25° C	23–40	53–68	64–70	S 〃	〃	200–500 –8–1100	200–500 –9–1200	〃
	0		37° C		0		818. 851. 999.	〃	300–400 –6–700	300–600 –7–1200	Smooth
	23–33		30° C		18–26						
65–72	35–53	18–21	25° C	17–19	55–68	65–68	S 〃	〃	300–650 –7–900	350–700 –8–1200	Slightly Furrowed
	0		37° C		0		1273.	〃	400–700 –1200	500–750 –1200	Smooth
	41		30° C		41						
68	53	20	25° C	17	52	64	S 〃	〃	400–800 –1300	500–800 –1300	Loosely Furrowed
	0		37° C		0		843. 1044. 321. 842. 998.	Slightly Fasciculate	250–500 –10–1100	400–600 –10–1300	Smooth or Loosely Furrowed
	16–30		30° C		17–33						
54–70	29–32	18–25	25° C	15–22	30–37	46–65	S 〃	〃	350–500 –10–1500	400–600 –12–1600	Radial Furrowed
	0		37 C		0		841. 1043.	〃	300–700 –10–1100	400–1000 –11–1200	Smooth
	20–22		30 C		20–23						
55–60	44–47	26–28	25° C	25–28	44–47	55–60	S 〃	〃	300–700 –11–1300	400–900 –11–1600	Radial Furrowed
	0		37° C		0		1042. 1224. 263.	Fasciculate	250–300 –5–600	300–550 –8–1000	Smooth or Loosely Furrowed
	20–26		30° C		22–24						
65–70	35–28	23–28	25° C	23–27	42–46	55–63	S 〃	〃	250–500 –8–1200	300–500 –8–1400	Radial Furrowed

P. viridi-cyclopium and *P. urticae* & *italicum series.*

Character of Margin	Colony Color and Color Change	Exudate	Colony Reverse	Pigmentation of Substratum
2.5 mm.: White	Dark Olive Buff or Yellowish Citrine —MA: Dark Olive Buff CA: Citrine Drab	Abundantly, Colorless or Pale Pinkish Buff	Vinaceous Fawn —Cinnamon Drab	Colorless
〃	〃	〃	〃	〃
0.2–2.0 mm.: White	American Green or Winter Green or Civette Green —Deep Grayish Olive or Sage Green or Vetiver Green	Limitedly or Abundantly, Colorless	Colorless —MA: Colorless or Smoke Gray CA: Uncolor or Mustard Yellow or Avellaneous	Colorless
〃	〃	〃	〃	〃
1.0–1.5 mm.: White	(Bluish) Winter or Hay's or French Green — 〃 or Celandine Green or Dark Glaucous	Abundantly, Colorless	MA: Colorless or Sea-Foam Yellow CA: Light Drab —MA: 〃 or Chamois CA: Cinnamon Drab	Colorless
〃	Meadow Green — 〃	〃	〃 —Natal Brown	〃
0.3 mm.: White	Spinach Green — 〃 or Cedar Green	Limitedly, White or Pale Yellow Green	MA: Clay Color CA: Sulphine Yellow —Mikado Brown or Xanthine Orange	1.0–1.5 mm.: Pinkish Buff or Vinaceous Cinnamon —Full: 〃 or Sulphine Yellow
〃	〃	〃	〃	〃
1.5 mm.: White	Cedar Green — 〃 or Parrot Green	Abundantly, Pale Yellow Green	Yellow Ocher —Amber Brown	1.7 mm.: Vinaceous Cinnamon —Full: Cinnamon Buff
〃	Varley's Green — 〃	〃	〃	〃
1.2–1.5 mm.: White	Deep Dull Yellow Green or American Green — 〃 or Celandine Green or Dark Yellowish Green	Limited, Colorless	Cinnamon or Pinkish Cinnamon —Mikado Brown or Orange Cinnamon	1.5–2.0 mm.: Pinkish Cinnamon —Full: Cinnamon
〃	〃	〃	Sanford Brown — 〃 or Sepia	2.0–2.5 mm: Orange Cinnamon—Full: 〃
0.8–1.2 mm.: White	(Bluish) Empire Green or Dark American Green —MA: American Green CA: Slate Olive	〃	Cinnamon or Vinaceous Cinnamon —Vinaceous Tawny	1.0–1.5 mm.: Pinkish Cinnamon —Full: 〃
〃	〃	〃	Orange Cinnamon — 〃	〃
1.0–1.5 mm.: White	Dark Zinc Green or Dark Russian Green —Nickel Green or Artmesia Green	Limitedly, Colorless or Pale Yellow	Clay Color or Cinnamon —Sudan Brown or Cinnamon	1.5–2.0 mm.: Pinkish Cinnamon —Full: Yellow Ocher
1.0–1.2 mm.: White	Dark Russian Gren Dark Grayish Olive	〃	Clay Color —Xanthine Orange	〃 —Full: Xanthine Orange

Table C-15 (2).

Rate of Growth: Steep agar mm. 20 Days	10 Days	5 Days	Culture Temp.	Rate of Growth: Czapek agar mm. 5 Days	10 Days	20 Days	Strain No	Texture	5–6 Days Depth μ	10–12 Days Depth μ	Character of Surface
	0		37° C		0		704. 634. 636. 1009.	Fasciculate	200–500 –6–800	200–600 –7–800	Smooth or Loosely Furrowed
	10–47		30° C		10–40		373. 997. 983.				
63–73	34–63	20–28	25 C	18–25	44–60	55 65	S 〃	〃	200–500 –8–1200	200–600 –8 1200	Radial Furrowed
	0		37° C		0		633. 572.	Slightly Fasciculate	250–300 –500	300–400 –600	Loosely Radial Furrowed in CA
	43–51		30° C		41–45						
65–67	54–57	18–20	25° C	17–18	48–52	60–63	S 〃	〃	300–400 –700	300–450 –750	〃
	0		37° C		0		985. 838.	〃	200–300 –6–700	250–400 –6–800	Smooth
	28–32		30° C		28–33						
66–70	42–62	24–28	25° C	22–23	42–50	58–62	S 〃	〃	200–400 –7–900	250–400 –7–900	Loosely Radial Furrowed
	0		37° C		0		1304.	〃	200–700 –1000	300–700 –1000	Slightly Furrowed in CA
	50		30° C		48						
68	55	25	25° C	23	50	62	S 〃	〃	250–450 –1200	300–550 –1200	Radial Furrowed
	0		37° C		0		1262.	〃	200–300 –600	250–400 –600	Smooth
	25		30° C		25						
64	42	20	25° C	19	41	63	S 〃	〃	200–300 –600	200–400 –600	Loosely Radial Furrowed
	0		37° C		0		1052. 1053. 1310.	Fasciculate	300–500 –8–1200	300–600 –10–1200	Smooth
	25–26		30° C		21–23						
72–74	55–61	33–35	25° C	26–29	43–48	57–63	S 〃	〃	300–500 –10–1300	300–600 –10 1400	Loosely Radial Furrowed
	0		37 C		0		624. 840. 845.	〃	250–400 –9–1200	300–500 –9–1200	Smooth or Loosely Radial Furrowed
	30–55		30° C		26–48						
65–72	48–68	25–35	25° C	21–32	50–60	60–66	S 〃	〃	250–500 –10–1200	250–500 –11–1400	〃
	0		37° C		0		1226. 1225. 1118. 334. 836. 1297.	〃	200–300 –7–2400	250–700 –12–2400	Smooth or Loosely Radial Furrowed
	13–40		30° C		12–40						
66–72	38–58	16–31	25° C	21–28	43–48	63–70	S 〃	〃	200–550 –12–3000	200–600 –10–3000	Radial Furrowed

Character of Margin	Colony Color and Color Change	Exudate	Colony Reverse	Pigmentation of Substratum
0.8–1.5 mm.: White	Sage Green or American Green —Lincoln Green or Leaf Green	Limitedly or Abundantly, Colorless	Colorless or Sulphur Yellow —CA: Naples Yellow MA: Pinkish Cinnamon or Ochraceous Salmon	Colorless — 〃 or 4–5 mm.: Sulphur Yellow
〃	〃	〃	〃	〃
0.8 mm.: White	American Green —MA: Pea Green or Sage Green CA: Grayish Olive	Limitedly, Colorless	Colorless or Sea-foam Yellow —MA: Sulphur Yellow CA: Olive Green	Colorless
〃	〃	〃	〃	〃
〃	Andover Green — 〃 or Vetiver Green	〃	Sulphur Yellow —Citrine Drab or Grayish Olive	〃
〃	〃	〃	〃	〃
1.0 mm.: White	MA: Bluish Terre Verte CA: Nickel Green —MA: Dark Zinc Green CA: Deep Grayish Olive	〃	Sea-foam Yellow — 〃 or Light Pinkish Cinnamon	〃
〃	〃	〃	〃	〃
1.2 mm.: White	Light Danube Green or Dark Zinc Green —Andover Green or Deep Grayish Green	〃	Marqurite Yellow —Cinnamon Drab	〃
〃	〃	〃	〃	〃
〃	Dark Russian Green —Dark Porcelain Green or Artmesia Green	〃	Colorless —CA: Light Drab MA: Pale Smoke Gray	〃
〃	〃	〃	〃	〃
1.0–1.2 mm.: White	Dark Russian Green — 〃 or Bluish Gray Green	〃	Colorless or Straw Yellow — 〃 or Smoke Gray	〃
〃	〃	〃	〃	〃
1.0–1.5 mm.: White	MA: Bluish Gray Green or Dark Zinc Green CA: Dark Russian Green — 〃 or Dusky Olive Green	Abundantly, Colorless	Cream Color or Chamois —Avellaneous or Waltnut Brown	Colorless — 〃 or 5 mm: Cream Buff
〃	〃	〃	〃	〃

Table C-15. (3)

Rate of Growth: Steep agar mm. 20 Days	10 Days	5 Days	Culture Temp.	Czapek agar mm. 5 Days	10 Days	20 Days	Strain No.	Texture	5-6 Days Depth μ	10-12 Days Depth μ	Character of Surface
	0		37° C		0		887.	Fasciculate	200-600 -1200	220-1000 -1600	Loosely Furrowed
	27		30° C		27						
57	45	37	25° C	25	44	55	S 〃	〃	200-600 -1400	600-1000 -1600	〃
	0		37° C		0		848. 1019.	Fasciculate	200-500 -6-700	250-700 -7-900	Radial Furrowed.
	28-30		30° C		27-28						
70-72	51-55	28-30	25° C	24-26	50-53	62-65	S 〃	〃	200-500 -6-700	200-600 -7-800	〃
	0		37° C		0		987.	Fasciculate	350-500 -1000	350-700 -1300	Loosely Radial Furrowed
	33		30° C		28						
75	65	31	25° C	25	50	60	S 〃	〃	400-650 -1200	400-700 -1200	Radial Furrowed
	0		37° C		0		1314. 1315.	Fasciculate	200-800 -900	200-900 -1200	Radial Furrowed, Raised in CA.
	40-42		30° C		30-32						
53-56	43-47	18-20	25° C	14-15	30-32	50-52	S 〃	〃	200-800 -1400	300-900 -1500	〃
	0		37° C		0		736. 740.	Fasciculate	250-400 -7-800	300-400 -11-1200	Smooth or Loosely Furrowed
	42-47		30° C		40-45						
70-75	62-65	22-25	25° C	21-23	60-61	68-70	S 〃	〃	250-500 -7-800	300-500 -10-1200	〃
	0		37° C		0		305.	Fasciculate	400-700 -800	400-800 -1200	Smooth
	11		30° C		15						
65	34	14	25° C	13	30	58	S 〃	〃	400-700 -800	500-1000 -1500	Loosely Radial Furrowed
	0		37° C		0		1201.	Fasciculate	200-300 -400	200-400 -800	Smooth
	54		30° C		53						
66	56	33	25° C	27	53	55	S 〃	〃	200-300 -400	200-400 -800	Smooth
	0		37° C		0		774.	Fasciculate	200-400 -700	200-500 -1100	Smooth; Raised in CA.
	68		30° C		40						
68	64	40	25° C	25	47	58	S 〃	〃	200-500 -800	200-600 -1300	〃

Character of Margin	Colony Color and Color Change	Exudate	Colony Reverse	Pigmentation of Substratum
1.0 mm.: White	Dark American Green —Lincoln Green	Abundantly, Pale Yellow Green	MA: Reed Yellow CA: Yellowish Olive —Yellow Ocher	Colorless —5 mm.: Colonial Buff
〃	〃 —Dusky Olive Green	〃	Raw Sienna— 〃	〃
1.5 mm.: White	Dusky Yellowish Green —Dusky Olive Green	Limitedly, Colorless	Colorless or Cream Buff —Avellaneous or Wood Brown	Colorless —5–6 mm.: Sulphur Yellow
〃	〃	〃	〃	〃
1.5 mm.: White	Dusky Dull Green —MA: Dark Ivy Green CA: Olivaceous Black	Abundantly Oil Green or Blackish Green	CA: Purple Drab MA: Sulphur Yellow —Chamois	Colorless
1.8 mm.: 〃	〃	〃	〃	〃
1.0–1.2 mm.: White	Sage Green or Pea Green — 〃	Limitedly, Chamois	Orange Cinnamon —Clay Color	10–12 mm.: Cinnamon Buff —Full: Cream Buff.
2.0 mm.: 〃	〃	〃	Snuff Brown— 〃	〃
1.0 mm-: White	Deep Dull Yellow Green —Celandine Oreen	Lacking	MA: Yellow Ocher or Sulphine Yellow CA: Mars Yellow	10 mm.: Pinkish Buff —Full: Antimony Yellow
〃	〃	〃	〃	〃
0.5 mm.: White	MA: Deep Bluish Glaucous CA: Artmesia Green —Sage Green	Abundantly, Sulphur Yellow	Orange Rufous —Xanthine Orange	15 mm.: Cinnamon Buff. —Full: Antimony Yellow
0.8 mm.: 〃	〃	〃	Orange Rufous —Amber Brown	〃
0.5 mm.: White	MA: Deep Bluish Glaucous CA: Deep Bluish Gray Green —Dark Bluish Gray Green	Lacking	MA: Tawny Olive CA: Saccardo's Umber —Chestnut Brown or Liver Brown	15 mm.: Cinnamon —Full: Kaiser Brown
0.8 mm.: White	〃	〃	Sepia—Bone Brown	20 mm.: Soyal Brown —Full: Chocolate
0.2 mm.: White	MA: Bluish Gray Green CA: Dark Yellow Green —MA: Dark Russian Green CA: Leaf Green	Lacking	Chamois —Clay Color	Colorless
0.5 mm.: White	Russian Green— 〃	〃	〃	〃

Table C—16. Colony characteristics of the *P. granulatum* and *P. claviforme*

Rate of Growth: Steep agar mm. 20 Days	Steep agar mm. 10 Days	Steep agar mm. 5 Days	Culture Temp.	Czapek agar mm. 5 Days	Czapek agar mm. 10 Days	Czapek agar mm. 20 Days	Strain No.	Texture	5–6 Days Depth μ	10–12 Days Depth μ	Character of Surface
	0		37° C		0		606.	Abundantly Coremia	400–1000 –1500	400–1000 –1500	Smooth, Lightly Zonate.
	30		30° C		23						
72	73	27	25° C	25	42	70	S 〃	〃	400–1000 –1400	400–1000 –1600	Typical Radial Furrowed
	0		37° C		0		852.	Abundantly Coremia	400–1000 –1600	400–1000 –1800	Radiately Furrowed, Zonate
	22		30° C		22						
75	66	34	25° C	32	60	73	S 〃	〃	400–1600 –2200	400–1600 –2300	〃
	0		37° C		0		1162. 1263. 1266. 554. 135. 739.	Coremia. Floccose in CA.	400–1000 –1200– 2000	400–1100 –1500– 2000	Smooth or Zonate, Radial Furrowed.
	27–52		30° C		26–48						
78–83	75–80	30–48	25° C	22–38	57–68	65–73	S 〃	〃	500–1200 –1600– –2500	700–1200 –1600– –2500	〃
	0		37° C		0		1277.	Coremia: Floccose in CA.	350–600 –1000	400–800 –1200	Slightly Radial Furrowed.
	65		30° C		40						
77	75	35	25° C	27	64	70	S 〃	〃	500–1000 –1500	500–1000 –1500	〃
	0		37° C		0		1278.	Coremia, Floccose in CA.	350–700 –1000	400–1000 –1500	Slightly Furrowed in CA.
	65		30° C		57						
78	75	34	25° C	28	65	70	S 〃	〃	350–1000 –1500	400–1000 –1500	〃
	0		37° C		0		1161.	Coremia	200–3200 –4200	5–6–8 –12 mm	Smooth; Yellow Mycelium
	45		30° C		35						
60	47	22	25° C	18	35	60	S 〃	〃	200–4000 –500	5–8 –16 mm	〃

series

Character of Margin	Colony Color and Color Change	Exudate	Colony Reverse	Pigmentation of Substratum
1.5 mm.: Fascicle Granular; White	Deep Dull Yellow Green —Empire Green or Dark American Green	Abundantly, White	Sea-Foam Yellow —Cinnamon Buff	Colorless
0.5 mm: 〃	〃 —Sage Green	〃	Clay Color —Cinnamon Buff	〃
5–6 mm.: White or Yellowish.	Deep Glaucous Green —Sage Green	Limited, Colorless	CA: Orange MA: Cadmium Yellow —CA: Raw Sienna MA: Sudan Brown	8 mm.: Light Ochraceous Buff —Full: Clay Color
3.0 mm.: 〃	〃	〃	〃 — Mars Brown	〃 —Full: Sudan Brown
2.0–2.5 mm.: Coremia. White	Russian Green or Dark American Green — 〃 or Celandine Green	Limitedly or Abundantly Colorless	Orange, Clay Color —CA: Raw Sienna or Yellow Ocher —MA: Baryta Yellow	4–10 mm.: Baryta Yellow —Full: Meize Yellow or Cinnamon Buff.
〃	〃	〃	Amber Brown —Raw Sienna	5–8 mm: Sienna —Full: Raw Sienna
2.0–2.5 mm.: White	White — 〃	Limitedly, Colorless	Chamois —Cinnamon	Colorless —5 mm.: Meize Yellow
〃	〃	〃	Mikado Brown— 〃	〃
2.5 mm.: White	Dark Olive Buff —Buffy Olive	Limitedly, Colorless	Cinnamon —Soyal Brown	7 mm.: Cinnamon Buff —Full: Soyal Brown
〃	〃	〃	〃	〃
2–3 mm.: Coremia, White	American Green — 〃 or Slate Olive	Limitedly, Amber Yellow	Naples or Mustard Yellow —Primulin Yellow or Ochraceous Tawny	Colorless —Full: Antimony Yellow
〃	〃	〃	Tawny Olive —Yellow Ocher	〃

Table C-17. Colony characteristics of the *P. luteum* and *P. duclauxi* and *P.*

Rate of Growth										
Steep agar mm.			Culture	Czapek agar mm.			Strain No.	Texture	5–6 Days Depth	10–12 Days Depth	Character of Surface
20 Days	10 Days	5 Days	Temp.	5 Days	10 Days	20 Days			μ	μ	
	14		37° C		12		364.	Slightly floccose or Funiculose	300–600 –800	400–1000 –1400	Loosely Radial Furrow. Lemon Yellow mycelium.
	40		30° C		35						
76	34	22	25° C	18	30	67	S 〃	〃	300–600 –1000	500–1000 –1600	〃
	3		37° C		3		1293.	Coremia	600–1000 –1300	600–1200 –1500	Radial Furrowed; White or Pale Yellow mycelium
	42		30° C		28						
70	45	28	25° C	15	32	70	S 〃	〃	600–1000 –1300	600–1000 –1500	〃
	5–8		37° C		5–10		71.	Typical Funiculose	380–1000 –1400	400 1000 –1400	Smooth; Zonate, White Yellow or Salmon mycelium
	70–73		30° C		70–72		1267.				
80	66–74	22–30	25° C	20–22	63–70	76–80	S 〃	〃	350–1000 –1600	430–1300 –2500	〃
	28–29		37° C		19–23		1212. 946.	Typical Funiculose	300–600 –12–1800	300–900 –16–1800	Zonate; Xanthine Orange mycelium Abundantly.
	35–44		30° C		27–37		1270. 777. 778.				
65–68	26–40	17–19	25° C	16–18	20–34	55–65	S 〃	〃	300–600 –13–1800	400–700 –16–2000	〃
	25		37° C		18		355.	Typical Funiculose	200–300 –1000	200–350 –1500	Loosely Radial Furrowd Zonate, Deep Chrome or Brown Sudan mycelium
	42		30° C		35						
59	35	18	25° C	16	27	46	S 〃	〃	200–400 –1200	200–500 –1500	〃
	12–42		37° C		10–40		301. 961.	Typical Funiculose	100 300 –300	100–300 –4–500	Smooth or Loosely Furrowed, Pink or Cinnamon mycellum.
	36–54		30° C		34–52		665.				
55–72	51–58	17–32	25° C	17–30	35–51	40–70	S 〃	〃	150–300 –350	150–300 –5–700	〃
	10		37° C		23		1114.	Typical Funiculose	200–350 –450	200–350 –450	Smooth; Yellow or Pink mycelium Abundantly.
	55		30° C		58						
70	65	20	25° C	18	66	73	S 〃	〃	250–550 –1000	250–800 –1200	Loosely Radial Furrowed
	47–57		37° C		38–42		671. 354. 356. 370.	Slightly Funiculose	100–200 –4–500	100–200 –4–550	Loosely Radial Furrowed, Yellow, Orange Pink mycelium.
	60–69		30° C		52–58						
57–68	48–58	27–38	25° C	22–32	43–51	57–61	S 〃	〃	100–200 –3–400	100–300 –3 600	〃

funiculosum series.

Character of Margin	Colony Color and Color Change	Exudate	Colony Reverse	Pigmentation of Substratum
0.5 mm.: White mycelium mixed	Helebore Green — 〃 or Andover Green (Lemon Yellow Perithecia, abundantly produced)	Lacking	CA: Ochraceous Orange MA: Apricot Yellow —CA: Salmon Orange MA: Light Orange Yellow	Colorless
〃	〃	〃	〃	〃
3 mm.: Coremia, White	Dull Blackish Green — 〃 or Olivaceous Black	Limitedly Colorless or Amber Yellow	CA: Orange Citrine MA: Aniline Yellow —CA: Brownish Olive MA: Verona Brown —Becoming Brazil Red in 4 weeks.	10 mm.: Aniline Yellow —15 mm.: Pinkish Cinnamon —Full: Brazil Red in 4 weeks.
〃	〃	〃	〃	〃
5 mm.: White or Sulphur Yellow	Dull Blackish Green —Dusky Olive Green	Abundantly, Colorless or Sulphur Yellow	CA: Brazil Red, Pansy Purple. MA: Colorless —CA: Hessian Brown MA: Mustard Yellow	Colorless
15 mm.: 〃	Pistachio Green — 〃	〃	Mars Orange —Liver Brown	〃
0.2–2.5 mm.: Salmon Orange or Orange	Bull Blackish Green — 〃	Limited: Salmon Orange	Brick Red or Morroco Red or Pompian Red —Mahogany Red or Hessian Red	5–10 mm.: Orange Pink —10–13 mm.: Salmon Orange or Grenadine Red.
〃	Danube Oreen —Dusky Dull Green	〃	English Red or Amber Brown— 〃	〃
0.5 mm.: White 1.5 mm.: Deep Chrome	Dusky Dull Green —Yellowish Olive	Limited, Mars Orange	Burnt Sienna CA: Argus Brown MA: Cadmium Yellow	8 mm.: Mars Yellow 10 mm.: 〃
〃	〃	〃	Chestnut— 〃	〃
3.0 mm.: White or Yellow mycelium	Light Hellebore or Lincoln Green —Dusky Olive Green or Dark Grayish Olive	Lacking	Kaiser Brown, Verona Brown —Coccao Brown	Colorless —5 mm.: Apricot Buff.
〃	〃	〃	〃	〃
2.5 mm.: Sulphur Yellow	Elm Green, Dark Dull Yellow Green —Dark Ivy Green	Lacking	Rufous —Vinaceous Cinnamon	Colorless
3 mm.: Pink	Yew Green — 〃	〃	〃	〃
1.0–2.5 mm.; Pale Greenish Yellow	Cedar Green or Yellowish Green —Dark Green or Andover Green	Lacking	Rufous or Verona Brown —Vinaceous Cnnamon or Warm Sepia	Colorless —5 mm.: Fawn Color
〃	〃	〃	〃	〃

Table C-17.

Rate of Growth: Steep agar mm. 20 Days	Steep agar mm. 10 Days	Steep agar mm. 5 Days	Culture Temp.	Rate of Growth: Czapek agar mm. 5 Days	Czapek agar mm. 10 Days	Czapek agar mm. 20 Days	Strain No.	Texture	5–6 Days Depth μ	10–12 Days Depth μ	Character of Surface
	24–42		37° C		38–55		1209. 949.	Typical Funiculose	200–300 –3–400	200–350 –4–500	Smooth; Pink, Yellow mycelium Abundantly.
	60–65		30° C		53–57						
67	52–62	25–27	25° C	18 26	48 58	60–65	S 〃	〃	200–300 –400	200–350 –4–500	〃
	3		37° C		3		379. 380.	Subfloccose or Slightly Funiculose	150–300 –350–400	150–300 –5–550	Zonate; Smooth; Yellow mycelium, mixed.
	20–21		30° C		18–19						
62–70	18–20	7–8	25° C	6 7	16–20	56–60	S 〃	〃	150–300 –5–550	150–400 –550–600	〃

Table C-18. Colony characteristics of the *P. purpurogenum series*.

	4–13		37° C		9–12		1143. 1211. 376.48. 1149. 722. 1306.	Typical Velvety	200–350 –4–500	200–500 7–100	Smooth; Colorless mycelium
	27–64		30° C		30–43						
38–73	25–55	14–20	25° C	8–18	24–38	36–75	S 〃	〃	250–400 45–500	250–400 –5–1000	〃
	22–30		37° C		13–18		76. 1179. 1074. 47.	Velvety or Velutinous	200–250 –28–400	250–300 –5–750	Smooth; Yellow, Pink, Orange mycelium, mixed.
	53–61		30° C		25–32						
73–75	42–55	12–17	25° C	6–8	22–31	47–60	S 〃	〃	200–400 –4–520	250–400 –6–830	〃
	25–40		37° C		13–33		1141. 377. 1072. 1073.	Velutinous or Floccose	200–300 –4–500	200–350 –5–900	Smooth; Orange, Red, mycelium, Abundantly.
	42–69		30° C		40–54						
45–80	42–54	16–31	25° C	6–15	30–44	35–80	S 〃	〃	200–300 –5–700	200–350 –5–1000	〃
	4		37° C		3		1147. 727.	Velvety	200–300 –5–450	200–400 –5–600	Smooth; Lemon Yellow mycelium.
	4–30		30° C		11–14						
10–34	7–28	5–12	25° C	3–7	12–13	18–23	S 〃	〃	200–300 –4–450	200–400 5–700	〃
	4		37° C		3		1154.	Velvety	500–800 –1000	500–1000 –1500	Loosely Furrowed; Pink mycelium.
	23		30° C		10						
28	22	12	25° C	6	10	18	S 〃	〃	600–900 –1600	600–1000 –1600	〃

Character of Margin	Colony Color and Color Change	Exudate	Colony Reverse	Pigmentation of Substratum
1.5–2.5 mm.: Pale Green Yellow	Cosse Green or Cerro Green —Dark Grayish Olive	Lacking	Vinaceous Cinnamon or Ochraceous Buff —Ferruginose or Soyal Brown	Colorless —5 mm.: Cinnamon Buff.
1.5–3.0 mm.: Yellow	〃	〃	〃	〃
0.5–0.8 mm.: White or Yellow	Dark American Green or Oil Green —Dull Blackish Green	Lacking	CA: Clay Color MA: Olive —Dull Blackish Green	5–7 mm.: Naple Yellow —10 mm.: 〃
〃	〃	〃	Mars Brown —Dull Blackish Green	〃
0.2–2.5 mm.: White or Grayish White	Dark Dull Yellow Green or Empire Green — 〃 or Dark Ivy Green or Dusky Olive Green	Lacking or Limited, Nopal Red or Scarlet	Scarlet or Maroon or Brazil Red — 〃	10–20 mm.: Scarlet or Grenadine Red —Full 〃 or Nopal Red
〃	〃	〃	〃	〃
1.0–1.5 mm.: Yellow or Pink	Yew Green, Dark Dull Yellow Green, Dusky Olive Green —Dull Blackish Green	Lacking or Limited, Brazil Red	Morrocco Red or Brazil Red — 〃 or Clart Brown	20–25 mm.: Nopal Red —Full: 〃
〃	〃	〃	〃 —Carmine	〃
2.5–4.0 mm.: Orange or Orange Red.	Limited or Localized sporulation; Yew Green, Dull Blackish Green — 〃 or Olivaceous Black	Lacking or Limited, Brazil Red	Carmine, Ox-Blood, — 〃	10–25 mm.: Scarlet. Brazil Red. —Full: 〃
〃	〃	〃	〃	〃
0.5–1.0 mm.: Lemon Yellow	Dark American Green, Empire Green — 〃 or Artmesia Green	Abundantly Peach Red	Ox-blood or Carmine — 〃 or Victoria Lake	10–13 mm.: Peach Red —18–22 mm.: 〃
〃	Hay's Green— Slate Olive	〃	〃	〃
2 mm.: White	Artmesia Green —Grayish Olive	Limited, Grenadine Red	Jasper Pink —Nopal Red	5 mm.: Jasper Pink —20 mm.: Peach Red
〃	〃	〃	〃	〃

Table C—18 (2).

Rate of Growth: Steep agar mm. 20 Days	10 Days	5 Days	Culture Temp.	Czapek agar mm. 5 Days	10 Days	20 Days	Strain No.	Texture	5–6 Days Depth μ	10–12 Days Depth μ	Character of Surface
	16		37° C		17		1145.	Velvety	500–600 –700	500–1000 –1500	Radial Furrowed
	21		30° C		26						
30	20	13	25° C	10	21	33	S 〃	〃	500 600 –750	500 1000 –1400	〃
	9		37° C		11		810.	Velvety	300–320 –350	300–500 –550	Smooth; Yellow, Red Pink mycelium.
	46		30° C		54						
70	46	11	25° C	11	45	70	S 〃	〃	300–450 1000	300–500 –1200	〃
	4–7		37° C		5–20		1152. 1207. 1189. 199.	Sub-floccose or Slightly Funiculose	200–280 –300	250–400 –500	Smooth; Russet Vinaceous, red. mycelium. Abundantly.
	65–68		30° C		40–60						
74–75	54–56	21–23	25° C	18–19	41–50	60–68	S 〃	〃	250–400 –5–700	300–500 –10–3000	〃
	8		37° C		7		645.	Sub-floccose or Slightly Funiculose	100–300 –500	100–500 –600	Loosely Radial Furrowed. Pink mycelium.
	50		30° C		40						
75	49	25	25° C	35	40	62	S 〃	〃	100–400 –600	100–400 –800	〃
	4–9		37° C		4–12		200. 808. 1210. 325. 316.	Velutinous or slightly Funiculose	200–250 –3–500	200–320 –3–600	Smooth; White or Yellow Mycelium.
	75–80		30° C		72–74						
80–85	37–78	22–38	25° C	18–33	56–74	80–85	S 〃	〃	300–800 –10–1700	300–900 –10–2200	〃
	4–15		37° C		6–12		1232. 1193. 1148.	Velutinous	200–300 –4–500	300–350 –4–800	Smooth; White Yellow mycelium.
	75–78		30° C		60–70						
75–85	66–68	20–25	25° C	16–18	57–65	74–80	S 〃	〃 or Funiculose	200–500 –8–2200	300–700 –10–3000	Loosely Radial Furrowed
	5–9		37° C		5–9		324. 1191. 562.	Typical Funiculose	200–350 4–500	300–400 –6–800	Smooth; White or Yellow mycelium.
	60–72		30° C		55–70						
75–85	70–79	22–30	25° C	18–23	55–78	73–85	S 〃	〃	200–500 –10–1500	200–800 –12–1800	〃
	6–7		37° C		4–19		942. 1175.	Velutinous	200–300 –350–400	250–400 –4–550	Smooth; Yellow, Red, mycelium.
	50–54		30° C		44–46						
65–70	44–49	17–18	25° C	17–18	42–46	62–65	S 〃	〃	200–350 –4–500	300–450 –5–600	〃

Character of Margin	Colony Color and Color Change	Exudate	Colony Reverse	Pigmentation of Substratum
2.0 mm.: White	Civette Green, Lincoln Green —Slate Olive or Deep Olive	Lacking	Carmine — 〃	8 mm.: Peach Red —20 mm.: 〃
〃	〃	〃	〃	〃
2.0–2.5 mm.: Thin; Pale Yellow.	Cerro Green, Dark American Green —Dusky Olive Green	Limited, Scarlet or Peach Red	CA: Peach Red MA: Orange Pink —Carmine or Peach Red	Colorless —5 mm.: Light Salmon Orange
〃	〃	〃	〃 — Morrocco Red	〃
1.5–1.7 mm.: Sulphur or Light Greenish Yellow	Civette Green, Cedar Green Olivaceous Black	Limited; or Lacking, Flesh Color	CA: Carrot Red MA: Apricot —Brick Red or Pomeian Red	Colorless 8—10 mm.: Light Salmon Orange
〃	〃	〃	〃	〃
2.5 mm.: Light Salmon Orange	Dull Blackish Green — 〃 or Olivaceous Black	Limited, Flesh Pink	CA: Morrocco Red MA: Peach Red — 〃	Colorless
〃	Lily Green— Andover Green	〃	〃	〃
2.0–3.0 mm.: White or Baryta Yellow	Russian Green or American Green or Empire Green — 〃 or Andover Green	Abundantly, Colorless, Sulphur Yellow	CA: Maroon. Buret Lake MA: Capucine Yellow —CA: Hays Maroon. Oxblood Red MA: Vinaceous Rufous (Sclerotia abundantly produced	〃
〃	〃	〃	〃	〃
2.0–3.0 mm.: White or Baryta Yellow	Dark Yellowish Green or Russian Green —Leaf Green or Andover Green	Abundantly Colorless or Sulphur Yellow	CA: Brick Red MA: Salmon Orange —CA: Pompian Red MA: Mineral Gray	〃
〃	〃	〃	Oxblood Red— 〃	〃
2.0–3.0 mm.: White or Sulphur Yellow	Leaf Green or Dark Dull Yellow Green — 〃	Limited, Colorless or Sulphur Yellow	CA: Marron or Hays Brown MA: Ox-Blood Red — 〃	〃
〃	Sage Green— Vetiver Green	〃	〃	〃
1.5–2.5 mm.: Sulphur Yellow	Crass Green or Javal Green —Nikel Green or Dusky Olive Green	Lacking or Limited, Orange Buff	CA: Xanthine Orange MA: Capucine Orange —CA: Buret Sienna MA: Ochraceous Orange	Colorless —5–10 mm.: Sulphur Yellow
〃	〃	〃	〃	〃

Table C—19. Colony characteristics of the *P. rugulosum series*.

Rate of Growth: Steep agar mm. 20 Days	10 Days	5 Days	Culture Temp.	Czapek agar mm. 5 Days	10 Days	20 Days	Strain No.	Texture	5-6 Days Depth μ	10 12 Days Depth μ	Character of Surface
	0		37° C		0		322. 375. 781.	Typically Velvety	200–300 –400	200–350 –4–450	Smooth: Compactly admixed Yellow Ocher mycelium in CA.
	21–22		30° C		21–23						
40–42	23–27	7–12	25° C	6–11	21–22	40–42	S 〃	〃	200–300 –400	200–400 –45–500	〃
	0		37° C		0		872.198. 710.383. 744.683. 810.924.	Typically Velvety	150–200 –3–450	150–300 –5–600	Smooth: Compactly admixed Yellow mycelium limited
	30–43		30° C		27–38						
65–70	30–42	10–17	25° C	8–16	27–37	52–63	S 〃	〃	150–300 –4–600	200–350 –5–700	〃
	0		37° C		0		689.	Typical Velvety	200–300 –350	150–300 –500	Radial Furrowed; Compactly admixed Orange mycelium, limited
	37		30° C		33						
60	36	15	25° C	13	32	60	S 〃	〃	200–500 –700	200–500 –1000	〃
	0		37° C		0		922. 923. 1183. 1184. 1206. 921.	Velvety or Velutinous	300–400 –7–800	300–400 –9–1200	Smooth; Pale Greenish Yellow mycelium, Compact Wave-like Zonate.
	31–32		30° C		34–38						
58–66	27–31	9–10	25° C	9–11	27–35	50–65	S 〃	〃	300–400 –8–1000	300–400 –8–1200	〃
	0		37° C		0		378. 939. 925.	Velvety or Velutinous	250–400 –4–600	300–400 –6–700	Smooth: Slightly wave-like Zonate; Yellow mycelium Abundantly.
	27–28		30° C		20–22						
60–70	21–28	11	25° C	10	20–28	55–58	S 〃	〃	250–400 –6–700	300–400 –8–1000	〃
	0		37° C		0		169.	Typical Velvety	150–200 –300	150–200 –320	Smooth; Colorless mycelium, limitedly.
	24		30° C		22						
63	21	9	25° C	10	24	58	S 〃	〃	150–200 –300	200–300 –500	〃
	0		37° C		0		1294.	Velvety	100–250 –300	150–300 –350	Smooth
	4		30° C		3						
6	5	3	25° C	3	4	5	S 〃	〃	100–250 –350	150–300 –400	〃
	0		37° C		0		1295.	Velutinous	50–100 –250	50–100 250	Smooth; Pale Yellow mycelium, Abundantly.
	7		30° C		10						
13	7	3	25° C	5	19	35	S 〃	〃	100–200 –350	150–300 –400	〃

Character of Margin	Colony Color and Color Change	Exudate	Colony Reverse	Pigmentation of Substratum
0.5–1.0 mm.: Colorless.	Dusky Yellowish Green —Dusky Dull Green	Lacking	CA: Raw Sienna MA: Lemon Chrome —CA: Olive Green SCA: Raw Sienna MA: Orange Citrine	Colorless —5–7 mm.: Sulphur Yellow
〃	〃	〃	〃	〃
0.5–1.3 mm.: White or Sulphur Yellow.	Lincoln Green or Pois Green or Cedar Green —Andovor Green or Tea Green or Olive Citrine	Lacking or Limited, Orange.	CA: Xanthine Orange MA: Sulphur Yellow —CA: Argus Brown MA: Capucine Yellow or Cadmium Yellow	Colorless
〃	〃	〃	〃	〃
0.5 mm.: White or Sulphur Yellow	Empire Green or Dark Yellowish Green — 〃	Lacking	CA: Ferruginose MA: Mars Yellow	Colorless
〃	〃	〃	〃	〃
1.0–2.5 mm.: Pale Greenish Yellow	Sparsely Sporulation; Tea Green or Andover Green — 〃	Lacking	Sulphur Yellow or Barium Yellow —Cadmium Yellow	Colorless — 〃 or 3–5 mm.: Sulphur Yellow
〃	〃	〃	〃	〃
1.0–2.0 mm.: Pale or Light Green Yellow	Javal Green or Dusky Yellowish Green — 〃 or Grape Green	Lacking	Deep Chrome —Orange	Colorless — 〃 or 3–4 mm.: Sulphur Yellow
〃	〃	〃	〃	〃
1.0 mm.: Thin, White or Pale Greenish Yellow	Dark Greenish Glaucous —Mytho Greenish	Lacking	Colorless	Colorless
〃	〃	〃	〃	〃
0.2 mm.: White	Dark Greenish Olive —Dark Ivy Green	Lacking	Colorless	Colorless
〃	Andover Green— Ivy Green	〃	〃	〃
Long sparsely: 12 mm.: Pale Greenish Yellow	Andover Green — 〃	Lacking	Primrose Yellow —CA: Apricot Orange MA: Pinard Yellow	Colorless
0.1 mm.: White	Bluish Gray Green —Andover Green	〃	Colorless	〃

Table C—20. Colony characteristics of the *P. herquei series.*

Rate of Growth: Steep agar mm. 20 Days	10 Days	5 Days	Culture Temp.	Rate of Growth: Czapek agar mm. 5 Days	10 Days	20 Days	Strain No.	Texture	5–6 Days Depth μ	10–12 Days Depth μ	Character of Surface
	0		37° C		0		951. 958.	Velvety or Velutinous	300–400 –6–1800	300–800 –8–1500	Smooth or Loosely Radial Furrowed, Yellow mycelium.
	50–60		30° C		38–43		651. 309. 1205.				
65–70	50–60	20–25	25° C	10–13	36–43	55–64	S 〃	〃	300–500 –8–1800	300–700 –9–1800	〃
	0		37° C		0		953. 957. 954.	Subflocose or Deeply Floccose	200–700 –8–2000	300–900 –15–4000	Smooth or Radial Furrowed; Raised in CA. Yellow mycelium.
	18–57		30° C		17–27		702. 264.				
45–74	22–60	10–20	25° C	8–10	17–30	30–56	S 〃	〃	300–700 –8–3800	800–1800 –20–4000	〃
	0		37° C		0		1028. 1313.	Velutinous	200–300 –500	250–400 –800	Thin, or Slightly Radial Furrowed.
	24–30		30° C		22–23						
38–62	27–31	12–16	25° C	10	22–25	28–60	S 〃	〃	200–500 –600	300–600 –6–1000	〃
	0		37° C		0		971. 964. 824.	Velutinous	200–500 –6–800	200–500 –6–800	Smooth; Yellow mycelium, abundantly admixed.
	25–58		30° C		52–62		670.				
40–78	25–58	14–30	25° C	21–26	50–68	70–75	S 〃	〃	230–550 –7–1200	230–800 9–1100	Radial Furrowed.
	0		37° C		0		1196. 1195.	Typical Velvety	150–250 –4–500	200–350 –45–500	Radial Furrowed.
	24–29		30° C		18–22						
62–74	46–62	30	25° C	25–27	40–50	60–71	S 〃	〃	200–400 –5–550	200–450 –5–600	〃
	0		37° C		0		1296.	Velutinous	200–250 –350	200–300 –400	Loosely Radial Furrowed
	51		30° C		36						
75	52	27	25° C	20	35	70	S 〃	〃	200–350 –600	200–600 –1200	〃

Table C—21. Colony characteristics of the *P. albicans series.*

	0		37° C		0		1316.	Slightly Funiculose	10–20 –40	10–20 –40	Smooth or Thin; Sparsely growing.
	35		30° C		30						
75	63	20	25° C	15	40	55	S 〃	〃	100–300 –400	200–400 –800	Radial Furrowed.

Character of Margin	Colony Color and Color Change	Exudate	Colony Reverse	Pigmentation of Substratum
0.5–1.5 mm.: Picric Yellow	Grass Green or Kronberg's Green or Dusky Olive Green — 〃 or Andover Green	Limited; Light Yellow Green	CA: Civette Green or Antique Green MA: Primulin Yellow —CA: Medal Bronze MA: Olivaceous Black	10–15 mm.: Javel Green —Full: 〃
〃	〃	Abundantly 〃	〃	〃
0.2–2.0 mm.: Sulphur or Light Green Yellow	Frence or Caliste Green or Celandine Green —Vetiver Green or Cendre Green	Limited or Abundantly, Javel Green or Raw Umber.	CA: Dull Blackish Green MA: citrine — 〃 or Olivaceous Black.	10–20 mm.: Javel Green —Full: 〃
〃	〃	〃	〃	〃
0.5 mm. or 10 mm. Sulphur Yellow	Dusky Yellowish Green, Parrot, Green — 〃	Lacking	Raw Umber or Antique Green —Blackish Brown —Dull Blackish Green in one month.	3–8 mm.: Pyrite Yellow —5–7 mm.: Amber Brown or Aniline Yellow
〃	〃	〃	〃	〃
1.5–2.0 mm.: Pale Yellow Green	CA: Dusky Olive Green or Dark Green MA: Dusky Yellowish Green or Antique Green —Dark Greenish Olive	Lacking or Abundantly, Colorless or Chamois	CA: Medal Bronze MA: Citrine Yellow —Orange Citrine or Medal Bronze	Lacking —5 mm.: Naples Yellow
〃	〃	〃	〃	〃
1.0 mm.: White	Dark American Green —Ivy Green or Light Brownish Olive.	Limited, Sulphur or Mars Yellow	CA: Dusky Olive Green MA: Clay Color —CA: Olive MA: Sepia or Light Brownish Olive	12–15 mm.: Aniline Yellow —Full: Sulphine Yellow
〃	〃	〃	〃	〃
1.5 mm.: White	CA: Andover Green MA: Pea Green —Grayish Olive	Lacking	CA: Dusky Yellowish Green MA: Ochraceous Buff —CA: Blackish Brown MA: Honey Yellow	8–10 mm.: Light Ochraceous Buff — 〃
〃	〃	〃	〃	〃
White throughout	Colorless	Lacking	Colorless	Colorless
3 mm.: White	Cream Buff—Pinkish Buff	〃	Chamois—MA: Caly Color CA: Saccardo's Umber	Colorless

Table M-1. Microscopic characteristics on conidial stage of the *P. thomii series*.

Species and Varieties	Conidia							
	Conidial Chain			Size μ	Form	Marking	Usual Number	Arrangement
	Colony μ	Slant μ	Form					
P. sclerotiorum van. Beyma	60–190	60–200	Parallel or Loosely Column	2.3–3.1 × 1.9–2.7	Elliptical	Smooth or nearly so	8–14	Parallel
P. thomii Maire	30–150	60–200	Loosely Column	2.5–3.6 × 1.5–2.8	Elliptical	Smooth or nearly so	7–10	Loosely Parallel
P. thomii Maire *var. flavescens* Abe	60–160	90–250	Loosely Column	2.8–3.6 × 1.7–2.1	Elliptical or rarely Sub-globose	Smooth or nearly so	8–14	Parallel
P. cinnamopurpureum Abe	60–280 –300	120–280 –320	Column	2.1–2.8 × 1.6–2.0	Elliptical or Sub-globose	Smooth or nearly so	5–8	Parallel

Table M-2. Microscopic characteristics on conidial stage of the *Monoglobosa*

Species or Varieties	Conidial Chain			Conidia		
	Colony μ	Slant μ	Form	Size μ	Form	Marking
P. purpurrescens (Sopp) Raper, Thom *and* Fennell	60–120 –180	60–200 –280	Loosely Column	2.5–4.3 or 4.6	Globose or Subglobose	Echinulate or Granular
P. spinulosum Thom	60–130 –230	60–250 –390	Column or Loosely Column	2.1–3.2 or 4.0	Globose or Subglobose	Spinulose
P. lilacino-echinulatum Abe	30–60	120–250	Parallel or Loosely Column	2.1–2.8	Globose or Subglobose	Echinulate or Verruculose
P. restrictum Gilman *and* Abbott	30–60	30–90	Loosely Tangled or Column	1.8–2.7	Globose or Subglobose	Echinulate or Granular
P. fuscum (Sopp) Raper, Thom *and* Fennell	30–120	120–380	Loosely Divergent	3.1–15.0	Globose or Subglobose	Tuberculate or Granular

Table M-3. Microscopic characteristics on conidial stage of the *Monoglobosa*

P. frequentans Westling	60–140 380	60–200 380	Column	2.1–3.2 –3.8	Globose or Subglobose	Smooth or nearly so
P. citreo-viride Biourge	30–90 –100	60–200 –320	Loosely Parallel or Column	1.2–2.2 –3.0	Globose or Subglobose	Smooth or nearly so

Sterigmata				Conidiphores				Scierotia	
Diameter μ	Length μ	Form	Marking	Apices μ	Diameter μ	Length μ	Marking	Size μ	Form
1.9–2.5	8.1–12.5	Tips Somewhat Narrowed	Smooth or nearly so	4.4–6.9	1.9–2.4	80–200	Smooth or neary so	180–400 × 150–300	Elliptical or Subglobose
1.8–2.6	7.5–10.0	Acute Type, Narrow	〃	3.0–5.4	2.8–3.6	100–400	Delicately Echinulate	280–440 × 210–350	Oblong or Rounded
1.7–2.5	9.3–10.6	〃	〃	3.7–6.2	2.1–3.4	90–300	Delicately Granular	190–510 × 150–410	Oblong or Rounded
2.0–3.0	10.6–12.6–15.0	〃	〃	3.1–5.0	2.0–3.1	60–180	Smooth or nearly so	120–320 × 90–200	Elliptical or Subglobose

series.

Sterigmata						Conidiphores			
Usual Number	Arrangement	Diameter μ	Length μ	Form	Marking	Apices μ	Diameter μ	Length μ	Marking
3–7 –13	Compact or Loosely Compact	2.1–3.2 –3.4	10.0– –13.1 –15.6	Acute Type	Smooth or nearly so	3.1–4.3 –5.0	2.1–2.9 3.5	60–230 250	Smooth or nearly so
6–8 –10	Compact	2.0–3.1 –3.7	7.9– –11.4 –13.2	〃	〃	3.0–5.0 –8.4	1.8–3.2 –3.9	60–160 –380	Smooth or nearly so. Slightly Punctate.
6–15	Compact Closely	1.5–2.5	5.0–7.5 (rarely, 9.3)	〃	〃	3.0–6.2	1.2–1.9	20–40	Smooth or nearly so
4–6	Somewhat Divergent	1.7–2.5	3.7–5.0	〃	〃	2.2–2.8	1.5–2.2	20–40	〃
5–10	Loosely Divergent	2.6–4.4	6.2–9.2	〃	Punctate	4.4–5.7	2.5–3.7	120–220	Granular or Punctate

series.

5–10 14	Compact	2.1–3.1 –4.0	8.4–10.0 –12.5	Acute Type	Smooth or nearly so	3.2–5.0 –8.5	2.5–3.6 –4.3	40–1200 –400	Somooth nearly so
4–7 –12	〃	1.2–1.8 –2.5	6.8–8.2 –9.4	〃	〃	2.3–3.1 –3.8	1.2–2.2 –3.0	30–60 –90	〃

Species or Varieties	Conidial Chain			Conidia		
	Colony μ	Slant μ	Form	Size μ	Form	Marking
P. citreo-viride Biourge *var. aeneum* Abe	30–90	60–160	Loosely parallel or Column	1.5–2.3	Typical Globose	Smooth or nearly so
P. vinaceum Gilman *and* Abbott	30–90	60–150	Tangled	2.1–2.8	Ovate or Subglobose (Apiculate)	Smooth or nearly so
P. multicolor G.-M. *and* P.	60–80 –190	90–150 –400	Loosely Parallel or Column	1.8–3.1 –3.7	Globose or Ovate or Subglobose	Smooth or nearly so
P. roseo-purpureum Dierckx	30–60	30–120	Loosely Parallel or Tangled	2.0–3.0	Globose or Subglobose	〃
P. terlikowskii Zaleski	60–120	90–180 –300	Tangled or Loosely Column	2.3–3.1 –3.3	〃	〃

Table M-4. Microscopic Characteristics on conidial stage of the *Monoelliptica*

P. trzebinskii Zaleski	30–70 –80	190–450	Parallel or Loosely Column	2.9–3.7 × 2.3–3.1	Elliptical or Ovate, Subglobose	Echinulate
P. trzebinskii Zaleski *var. magnum* Sakaguchi *and* Abe	10–180	80–260	Loosely Column or Parallel	3.3–4.7 × 2.6–3.6	Elliptical or Ovate	Echinulate or Granular
P. trzebinskianum Abe	30–160 –190	120–320 –360	Parallel or Loosely Column	2.5–3.8 × 2.3–3.1	Elliptical or Ovate, Subglobose	Echinulate
P. fusco-flavum Abe	30–60	60–120	Tangled	3.7–6.0 × 3.0–4.0	Elliptica or Subglobose	Echinulate or Verruculose

Table M-5. Microscopic Characteristics on conidial stage of the *Monoelliptica*

P. lividum Westling	60–110 –160	60–150 –190	Tangled or Loosely Column	3.1–4.4 × 2.3–3.1	Elliptical or Ovate, Fusiform	Smooth or nearly so
P. aurantio-violaceum Biourge	60–150 –250	60–230 –280	Parallel or Loosely Column	2.5–3.7 × 1.8–3.1	Elliptical or Ovate, Subglobose	〃
P. chermisinum Biourge	60–120	190–380	Column	2.3–3.0 × 1.4–2.0	Elliptical	〃

	Sterigmata					Conidiphores			
Usual Number	Arrangement	Diameter μ	Length μ	Form	Marking	Apices μ	Diameter μ	Length μ	Marking
5–12	〃	1.3–2.3	6.8–8.7	〃	〃	2.4–3.5	1.7–2.3	30–120	〃
3–7	Somewhat Divergent	1.4–2.5	6.2–8.7	〃 Apices Narrowed	〃	2.1–3.1	1.2–1.9	19–60	〃
6–12 –14	Loosely Parallel or Column	2.1–3.0 –3.5	8.1–10.6 –17.5	Acute type	Smooth or nearly so	3.7–6.3 –7.5	2.0–3.4 –3.7	140–120 –19	Smooth or nearly so
5–10	Loosely Parallel or Divergent	2.0–3.0	10.6– 12.5	〃	〃	3.1–4.1	3.1–3.7	30–60	〃
6–10 –15	Parallel or Compact	1.8–2.7 –2.8	5.0 8.7 –15.6	〃	〃	2.6–4.2 –7.5	1.2–2.0 –3.2	10–60 –170	〃

series.

5–10 –12	Compact	2.5–3.2 –3.3	8.7–10.6 –14.3	Acute Type	Smooth or nearly so	4.3–6.3 –6.5	2.8–3.9 –4.1	120–300 –430	Puncatate, Small Granular
5–8	Compact or Loosely	2.1–3.7	14.0– 18.0	〃 Narrowly Tips.	〃	3.7–5.0	2.0–3.8	180–440	Puncatate, or Small Granular
5–12	Compact	2.1–2.8 –3.2	8.7–11.3 –12.5	Acute Type	〃	3.7–6.9 –7.5	2.0–3.7 –4.0	60–200 –280	〃
3–8	Somewhat Divergent	1.8–3.0	6.2–7.5	〃	〃	3.7–6.2	2.2–3.7	15–30	Punctate

series.

5–10	Parallel or Loosely	2.1–3.0	8.1–12.5 –15.0	Acute Type	Smooth or nearly so	3.1–5.0	2.1–3.4	170–400 –640	Smoth or nearly so
5–14	Compact or Loosely	1.8–3.0 –3.1	8.1–10.6 –11.9	〃	〃	3.7–6.3 –8.8	2.1–3.7	90–380 –440	Smoth or, Punctate, Granular.
10–15	Crowded	1.2–1.8	8.1–10.6	Often Incurved, Narrowly	〃	4.3–6.8	1.5–2.3	30–60	Smooth or nearly so

Species or Varieties	Conidial Chain			Conidia		
	Colony μ	Slant μ	Eorm	Size μ	Form	Marking
P. phoeniceum van Beyma	30–60	30–150	Loosely Tangled	3.0–3.7 × 2.1–2.7	Elliptical or Apiculate	Smooth or nearly so
P. implicatum Biourge	30–120 –340	60–260 –500	Column or Parallel, or Loosely	2.3–3.2– –4.7× 1.8–2.5 –3.7	Elliptical or Ovate, Subglobose	〃
P. sublateritium Biourge	60–200	120–380	Loosely Column or Parallel	3.1–4.0 × 2.5–3.1	Elliptical or Subglobose	〃
P. adametzioides Abe	30–90	60–190	Tangled	2.3–3.3 × 1.5–2.5	Elliptical or Ovate	〃

Table M–6. Microscopic characters on conidial stage of the *Monoelliptica series.*

P. decumbens Thom	30–60 –120	30–90 –230	Loosely Column or Tangled	2.1–3.0 –3.3× 1.6–2.4	Elliptical or Ovate, Fusiform	Smooth or nearly so
P. decumbens Thom *var. atro-virens* Abe	60–130	120–380	Column or Tangled	2.4–3.1 × 1.8–2.5	Elliptical or Subglobose	〃
P. fellutanum Biourge	60–90 –120	60–120 –350	Column or Loosely Column	2.5–3.2 3.4× 1.8–2.6	Elliptical or Ovate, Subglobose	〃
P. fellutanum Biourge *var. nigro-castaneum* Abe	30–120	60–260	Loosely Column or Parallel	2.5–3.4 × 2.1–2.8	Elliptical or Subglobose	〃

Table M–7. Microscopic characters on conidial stage of the *Ramigena series.*

P. capusulatum Raper *and* Fennell	30–60	30–90	Loosely Parallel or Column	2.6–3.2 × 1.8–2.7	Elliptical or Capsule Shape	Smooth or nearly so
P. cyaneum (*B. and S.*) Biourge	60–90	60–120	Loosely Column	3.0–4.0 × 2.1–2.8	Elliptical With ends pointed.	〃
P. charlesii Smith *var. rapidum* Abe	30–90	60–120 –200	Column	1.9–3.4 –3.7	Globose or Subglobose	〃
P. velutinum var. Beyma	60–90 –120	60–220 –240	Loosely Tangled or Parallel	2.1–3.1 or 3.4	Globose or Ovate, Subglobose	Echinulate or Verruculose

Sterigmata						Conidiophores			
Usual Number	Arrangement	Diameter μ	Length μ	Form	Marking	Apices μ	Diameter μ	Length μ	Marking
6–10	Parallel or Slight Divergent	1.8–2.5	12.5–16.0	Gradually Tapered Tip.	Smooth or nearly so	3.0–3.1	1.8–2.5	60–190	Delicately Punctate
6–12 –14	Compact or Somewhat Divergent	2.0–3.0 –3.7	9.3–11.9 –16.2	Acute Type	〃	3.5–6.8 –9.4	1.8–2.8 –3.5	30–120 –190	Smooth or nearly so
6–10	Parallel	2.1–3.1	9.3–13.1	〃	〃	3.7–5.6	1.9–2.8	30–130	〃
6–10	Compact or Somewhat Divergent	1.8–2.5	8.7–10.6 (–15.6)	〃	〃	3.1–6.2	1.8–3.1	30–120	〃
6–10 –14	Compact Parallel	1.6–2.2 –3.2	6.8–9.4 (–12.5)	Acute Type	Smooth or nearly so	2.5–4.0 (–8.7)	1.2–2.2 –3.4	30–45 –120	Smooth or nearly so
7–14	Parallel, or Compact	1.7–2.5	6.8–9.3 –13.7	〃	〃	3.7–6.2	1.5–2.5	50–120 (–250)	〃
4–8 –10	Compact, Parallel	1.7–2.3 –2.7	7.5–10.0 –12.5	〃	〃	3.1–4.3 –4.7	1.6–2.3 –2.9	30–150 –180	〃
6–12	Parallel	2.1–3.1	10.0–13.2	〃	〃	3.0–4.3	1.7–2.0	44–120	〃
5–10	Compact, Parallel	1.5–2.1	7.5–9.4 –12.5	Acute Type	Smooth or nearly so	3.1–5.0 –5.6	1.2–2.4	30–60	Soomth or nearly so
4–6	〃	1.5–2.7	8.3–12.5	〃	〃	1.8–3.0	1.5–2.5	60–120	〃
5–8 –10	Compact. Somewhat Divergent	1.5–2.6 –3.1	7.9–10.9 –12.5	〃	〃	2.6–3.7	2.0–3.1	30–90 –120	〃
3–5–7	Loosely Divergent	1.5–2.4 –3.1	6.2–8.0 –9.4	〃	〃	2.5–3.6 –4.4	2.5–2.7 –3.4	2.1–2.7 –3.4	100–300 –380

Table M-8. Microscopic characteristics on conidial stage of the *P. lilacenum*

Species and Varieties	Codidial Chain			Conidia	
	Colony μ	Slant μ	Form	Size μ	Form
P. lilacinum Thom	50–90	60–200	Tangled	2.5–3.5 × 2.1 2.5	Elliptical or Fusiform
Spicaria violacea Abbott	50–80	80–180	〃	2.5–3.8 × 1.7 2.5	Fusiform or Elliptical
P. janthinellum Biourge	30–90 –160	60–160 –280	Tangled or Loosely Divergent	2.1–3.7 × 1.8–3.1	Ovate or Subglobose with one end Apiculate
P. simplicissimum (Oud) Thom	30–80 –120	60–130 –200	Tangled	2.3–3.7 × 2.1 3.1	Elliptical or Ovate, Subglobose
P. piscarium Westling	40–90 –130	60–120 –200	Tangled, Loosely Parallel	2.5–3.8 × 1.8–3.1	Elliptical or Ovate
P. ochro-choron Biourge	30–90 –160	50–180 –320	Tangled or Loosely Divergent	2.3–4.1 × 2.1–3.1	Elliptical or Ovate with one end Apiculate
P. miczynskii Zaleski	60–90	60–220	Tangled, Loosely Divergent	2.8–3.8 × 2.2–3.1	Ovate or Subglobose

Table M-9. Microscopic characteristics of the *P. canescens series*

P. nalgiovensis Laxa	10–60	60–120	Loosely Column or Divergent	1.5–3.2	Globose or Subglobose
P. echinulo-nalgiovense Abe	30–70 –130	40–130 –160	Column or Loosely Tangled	2.5–3.5 –3.8	Straw-berry Shape or Subglobose
P. canescens Sopp	30–100	60–130	〃	2.1–3.0	Globose or Subglobose
P. jenseni Zaleski	30–90	60–180	Loosely Column	2.0–2.7	〃
P. nigricans (Bainier) Thom	60–80	90–160	Parallel or Tangled, Divergent	2.3–3.1	〃
P. nigricans (Bainier) Thom *var. sulfuratum* Abe	30–90	60–160	Loosely Parallel, Tangled	2.5–3.4	〃
P. melinii Thom	30–90 –120	60–200 –220	Loosely Tangled, Divergent	1.8–2.8 –3.0	Globose

and *P. janthinellum series.*

Marking	Sterigmata					
	Usual Number	Arrangement	Diameter μ	Length μ	Form	Marking
Smooth or nearly so	6–8	Loosely Compact	1.5–2.5	6.2–9.4	Abruptly Tapered	Smooth or nearly so
〃	3–7	〃	2.1–2.6	9.3–15.6	〃	〃
〃	3–7–8	Loosely Divergent, Compact	1.3–2.5 –2.8	7.5–10.6 –13.7	Abruptly, Narrowly Taper	〃
Echinulate or Verruculose	3–6–7	Loosely Compact	2.0–2.6	7.5–10.6	〃	〃
Echinulate	2–4–6	Loosely Divergent	1.8–2.4 –3.0	6.2–10.6 –12.5	〃	〃
Smooth or roughened	3–6	Loosely Compact, Divergent	1.8–2.6 –2.8	7.5–10.6 –12.5	〃	〃
Smooth or nearly so	3–6	Loosely Compact	1.7–2.6	8.7–10.6	Gradually Tapered	〃

and *P. nigricans series.*

Smooth or nearly so	4–7	Compact or Loosely	1.5–2.5	6.2–8.7	Acute Type, Tips Narrowly	Smooth or nearly so
Echinulate	3–6–7	〃	2.1–2.8 –3.4	8.5–10.4 –12.5	〃	〃
Slightly Roughened	3–6	〃	1.7–2.5	7.5–10.0	Abruptly Narrow Tips	Smooth or Punctate
Delicately Echinulate	5–7	Loosely Compact	1.8–2.4	7.5–9.6	Acute Type	Smooth or nearly so
Aculeate	5–10	More or less Divergent	2.3–3.0	6.2–7.5	〃	〃
〃	5–8	Somewhat Divergent	1.8–3.0	6.2–8.7	〃	〃
〃	8–9	〃	1.5–2.3 –2.5	6.2–8.1	Abruptely Narrowly Tips	〃

M-8. (Continued)

Species and Varieties	Metulae					
	Usual Number	Arrangement	Apices μ	Diameter μ	Length μ	Marking
P. lilacinum Thom	3–7	Loosely Compact, Divergent	2.1–3.0	2.0–2.8	6.2–11.2	Smooth or nearly so
Spicaria violacea Abbott	3–5	〃	2.8–3.5	2.0–2.9	8.0–12.0	〃
P. janthinellum Biourge	2–3–4	Divergent	1.7 3.4 –4.7	1.2–2.7 –4.4	6.2–15.6 –21.0	Smooth, Punctate, Granular
P. simplicissimum (Oud) Thom	2–4–5	〃	2.8–4.1 –4.4	2.3–3.1 –3.4	9.3–15.6 –22.0	Punctate or Granular
P. piscarium Westling	2–4–5	〃	2.5–3.3 –4.3	1.8–2.6 –3.5	10.6 –18.7 –22.0	Smooth or nearly so
P. ochro-choron Biourge	2–4–5	〃	2.5–3.9 –4.7	2.1–3.4 –4.3	6.2–21.0 –23.0	Punctate or Granular
P. miczynskii Zaleski	2–4	〃	2.8–3.8	2.1–3.4	9.3–18.7	Smooth or nearly so

M-9. (Continued)

P. nalgiovensis Laxa	2–4	Divergent	2.0–3.4	1.8–3.0	6.2–18.0	Smooth or nearly so
P. echinulo-nalgiovense Abe	2–3–4	〃	2.5–3.3 –4.4	2.1–3.0 –3.2	9.3–15.6 –20.0	Punctate or smooth
P. canescens Sopp	2–4	〃	3.1–4.7	2.5–3.4	9.3–15.6	Punctate
P. jenseni Zaleski	2–4	〃	2.5–3.5	2.0–2.8	8.0–11.2	Smooth or nearly so
P. nigricans (Bainier) Thom	3–6	Strongly Divergent	3.1–4.5	2.5–3.2	6.2–12.5	〃
P. nigricans (Bainier) Thom *var. sulfuratum* Abe	3–5	〃	3.1–4.3	2.5–3.4	9.3–18.7	〃
P. melinii Thom	2–4	〃	2.8–4.1 –4.4	1.8–2.5 –3.4	8.9–15.6	Slightly Punctate

Branches				Conidiphores			
Apices μ	Diameter μ	Length μ	Marking	Apices μ	Diameter μ	Length μ	Marking
2.3–3.0	2.1–2.8	6.2–25.0	Smooth or nearly so	2.3–4.0	1.8–3.0	30–120 –380	Smooth or nearly so
2.8–3.8	2.1–3.0	8.0–14.0	〃	3.0–3.8	2.5–3.2	70–300	〃
1.9–3.2 –4.7	1.3–2.7 3.8	6.2–20.0 –31.0	Smooth or Granular, Punctate	1.8–3.8 –4.7	1.2–2.8 –3.8	30–120 –500	Smooth or Granular Punctate
2.8–4.0 –4.3	2.3–3.3 –3.5	9.3–21.0 –38.0	Punctate or Granular	3.1–4.4 –4.5	2.5–3.7 –4.3	60–380 –500	Granular
2.5–3.4 –4.3	1.8–2.8 –3.8	9.3–21.0 –25.0	Smooth or nearly so	2.3–3.3 –4.0	1.8–2.8 –3.7	190 –380 –390	Smooth or nearly so
2.8–5.0	2.3–3.8 –4.1	6.2–25.0 –37.0	Granular	2.5–4.7 –5.0	2.1–3.8 –4.4	120 –500 –600	Granular
2.8–4.1	2.3–3.4	6.2–25.0	Smooth or nearly so	2.8–4.4	2.3–3.4	120 –500	Smooth or nearly so
2.5–4.0	2.0–3.7	7.0–20.0	Smooth or nearly so	2.8–6.2	1.8–5.0	300 –1000	Smooth or nearly so
2.7–3.8 –4.5	2.0–3.2	10.0 –20.0 –25.0	Smooth or Punctate	3.0–3.6 –4.4	2.5–3.3	60–190 –380	Punctate
3.1–4.6	2.5–3.4	7.5–20.0	Small Granular	3.1–4.1	2.5–3.1	60–300	Granular
2.6–3.6	2.0–2.8	7.5–20.0	Smooth or nearly so	2.5–3.5	2.0–2.8	100 –380	Smooth or nearly so
4.3–5.6	2.8–3.4	18.0 –31.0	〃	4.0–5.0	2.8–4.2	90–250	〃
3.0–4.4	2.5–3.3	10.2 –26.4	〃	3.1–4.4	2.5–3.1	60–250	〃
2.8–4.4 –4.5	1.9–3.0 –3.6	10.2 –25.0 –30.5	Punctate or Granular	3.1–4.4	1.9–3.1 –3.6	30–150 –200	Granular or Tuberbuleate

Table M-10. Microscopic characteristic on conidial stage of the *P. citrinum*

Species and Varieties	Conidia				
	Conidial Chain			Size μ	Form
	Colony μ	Slant μ	Form		
P. citrinum Thom	60–120 –300	50–250 –400	Column	1.5–2.8 –3.3	Globose or Subglobose
P. steckii Zaleski	60–130 –200	60–220 –380	Colnmn	1.5–2.5	Globose or Subglobose
P. citreo-virens Abe	60–120	120–320	Column or Loosely Tangled	2.3–3.3	〃
P. corylophilum Dierckx	30–90 –190	60–260	Tangled, loosely Column	1.8–3.1 × 1.5–2.5	Elliptical or Subglobose
P. corylophiloides Abe	60–90	120–320	〃	2.5–3.4 × 2.0–2.6	〃
P. paxilli Bainier	60–180	60–250	Tangled or Divergent	2.5–3.4 × 1.8–2.5	Elliptical or Ovate

Table M-11. Microscopic characteristic on conidial stage of the *P. chrysogenum series*.

Species or Varieties	Conidia				
	Conidia Chain			Size μ	From
	Colony μ	Slant μ	Form		
P. chrysogenum Thom	60–150 –200	90–280 –400	Column	3.0–4.3 × 2.1–3.8	Elliptical or Ovate, Subglobose
P. chrysogenum Thom *mut. fulvescens* Takashima, Arima *and* Abe	60–200	90–280	Column	3.0–3.8 × 2.3–3.1	Elliptical or Subglobose
P. meleagrinum Biourge	60–180	120–260	Column or Loosely	3.0–3.7 × 2.1–3.1	〃
P. meleagrinum Biourge *var. viridi-flavum* Abe	60–190	120–380	Column	2.1–3.0 × 1.7–2.6	〃
P. notatum Westling	60–130 –260	60–150 –300	Column or Loosely Tangled	2.0–3.2 –3.7	Globose or Subglobose
P. cyaneo-fulvum Biourge	60–180 –200	60–200 –240	〃	2.1–3.2 –3.8	〃

series.

	Sterigmata				
Making	Usual Number	Arrangement	Diameter μ	Length μ	Form
Smooth	3–8–10	Parallel or Compact	1.5–2.4–3.0	7.5–11.6 –12.5	Acute Type
Smooth	4–7–10	Compact or Parallel	1.7–2.3–2.5	8.1–10.0 –10.6	〃
〃	3–7	〃	1.7–2.5	7.5–11.9	〃
〃	4–6–8	Parallel or Loosely Compact	1.5–2.5	7.5–9.4 –12.5	〃
〃	5–8	〃	2.0–2.8	10.0–11.9	〃
Smooth or nearly so	4–6	Compact	2.1–2.5	8.0–10.0	〃

	Sterigmata					
Marking	Usual Number	Arrangement	Dia-meter μ	Length μ	Form	Marking
Smooth or nearly so	3–6–7	Compact	1.8 3.0 –3.3	7.5–10.0 –11.0	Acute Type	Smooth or nearly so
〃	3–6	〃	1.8–3.0	7.5–9.4	〃	〃
〃	3–6	〃	1.8–3.1	8.7–10.0	〃	〃
〃	4–8	〃	1.8–2.6	8.1–10.0	〃	〃
〃	3–5–8	〃	1.8–2.5 –3.3	7.5–9.4 –10.6	〃	〃
〃	2–5–6	〃	2.1–2.8 –3.4	7.5–8.8 –11.2	〃	〃

Table M-10. (continued)

Species or Varieties	Sterigmata	Metulae		
	Marking	Usual Number	Arrangement	Apices μ
P. citrinum Thom	Smooth or nearly so	2-4-6	Compact, Somewhat Divergent	3.0-5.0-6.2
P. steckii Zaleski	〃	2-4-5	Somewhat Divaricate	2.5-4.7-5.5
P. citreo-virens Abe	〃	3-5	Compact, Slightly Divergent	2.6-4.7
P. corylophilum Dierckx	〃	2-3-5	Somewhat Divergent	3.0-4.4-6.2
P. corylophiloides Abe	〃	4-5-8	Compact or Loosely	3.7-4.7
P. paxilli Bainier	〃	5-8	Compact	3.0-4.3

Table M-11. (continued)

Species and Varieties	Metulae					
	Usual Number	Arrangement	Apices μ	Diameter μ	Length μ	Marking
P. chrysogenum Thom	2-5-7	Compact, Loosely Compact	3.1-4.4-5.6	2.4-3.7-4.6	7.5-12.5-17.5	Smooth or nearly so
P. chrysogenum Thom *mut. fulvescens* Takashima, Arima *and* Abe	2-5	Compact	3.4-5.6	3.1-5.0	7.5-12.5	〃
P. meleagrinum Biourge	2-6	Compact, Loosely Compact	3.1-4.1	2.1-3.7	9.3-13.7	〃
P. meleagrinum Biourge *var. viridi-flavum* Abe	2-5	〃	2.5-4.7	2.1-3.8	9.3-18.7	〃
P. notatum Westling	2-3-6	〃	2.5-3.4-5.0	2.1-3.0-4.3	6.2-12.0-15.6	〃
P. cyaneo-fulvum Biourge	3-4-5	〃	2.8-4.1-5.6	2.5-3.5-4.5	6.1-12.0-18.7	〃

Metulae			Conidiophores			
Diameter μ	Length μ	Marking	Apices μ	Diameter μ	Length μ	Marking
2.1–3.4 –4.3	10.0–16.0 –23.0	Smooth or nearly so	3.0–4.1 –5.6	2.1–2.8 –3.7	60–130–230	Smooth or nearly so
1.7–3.1 –3.7	10.0–15.6 –18.7	〃	2.8–4.3	1.8–3.0 –3.7	50–180–260	〃
2.5–3.7	12.5–25.0	〃	2.8–4.7	2.5–3.7	60–250	〃
2.1–3.5 –3.7	10.6–18.7	〃	3.0–4.4 –5.6	1.8–3.1 –4.3	120–280 –380	〃
2.5–3.4	12.5–18.7	〃	3.4–4.7	2.5–3.2	130–180	〃
2.8–3.6	9.3–12.5	〃	4.0–4.7	3.1–4.0	120–240	〃

Branches				Conidiophores			
Apices μ	Diameter μ	Length	Marking	Apices μ	Diameter μ	Length μ	Marking
3.0–4.4 –6.3	2.3–3.4 –5.0	11.4–20.0–34.0	Smooth or nearly so	3.4–5.0 –6.3	3.1–4.4 –6.0	120–320 –600	Smooth or nearly so
3.1–5.6	3.0–5.0	9.3–18.7	〃	3.7–5.6	3.3–4.8	380–600	〃
3.1–3.8	2.1–3.7	12.5–25.0	〃	3.4–4.7	3.1–4.3	190–380	〃
2.8–5.6	2.1–3.8	9.3–31.0	〃	2.8–5.0	2.1–3.8	120–380	〃
2.8–3.3 –5.0	2.5–3.0 –4.3	6.3–18.0 –31.0	〃	2.8–4.3 –7.5	2.5–3.7 –6.8	120–220 –500	〃
3.0–4.3 –6.3	2.5–3.8 –5.0	12.0–18.7–30.0	〃	3.1–4.9 –6.3	2.5–4.3 –5.0	120–380 –500	〃

Table M-12. Microscopic characteristics on conidial stage of the *P. oxalicum*

Species and Varieties	Codidial Chain			Conidia Size μ	Conidia Form
	Colony μ	Slant μ	Form		
P. oxalicum Currie *and* Thom	60–300 –400	120–450 –500	Column	3.4–5.4 × 2.5–4.0	Elliptical
P. atramentosum Thom	60–160	60–220	Column or Somewhat Divergent	3.1–4.5 × 2.0–3.1	Elliptical or Subglobose

Table M-12. (2) 〃 of the *P. digitatvm series.*

P. digitatum Saccardo	10–300	60–1200	Loosely Parallel	3.7–9.4 × 2.5–4.4	Cylindrical or Elliptical
P. digitatum Saccardo *var. latum* Abe	60–120	120–260	Loosely Divergent, Tangled	3.7–5.6 × 2.5–3.7 (larger 6.2–7.5 × 2.5–4.4	〃

Table M-12. (3) 〃 of the *P. roqueforti series.*

P. roqueforti Thom	60–120 –200	60–150 –380	Loosely Column or Tangled	2.8–3.8 –5.0	Globose or Subglobose
P. roqueforti Thom *var. punctatum* Abe	60–190	90–220	Tangled, Somewhat Divergent	2.5–4.3	〃
P. casei Staub	60–250 –380	120–400	Loosely Column or Tangled	3.1–3.9 × 2.3–3.1	Elliptical or Subglobose
P. casei Staub *var. compactum* Abe	60–150	120–260	Column or Loosely Column	3.1–4.3 × 3.0–3.8	Ovate or Subglobose
P. pseudo-casei Abe	60–190	60–190	Loosely Column or Tangled	3.1–4.1 × 3.0–3.4	Elliptical or Ovate

Table M-13. Microscopic characteristics on conidial stage of the *P. brevi-*

P. brevi-compactum Dierckx	60–120	60–180	Loosely Parallel	2.1–3.4	Globose or Subglobose
P. stoloniferum Thom	60–120	90–180 –260	Loosely Parallel, Divergent	2.5–4.2 × 2.1–3.4	Elliptical or Subglobose
P. brunneo-stoloniferum Abe	60–170	130–380	〃	2.3–3.3 × 2.1–2.8	〃

series.

Sterigmata						
Marking	Usual Number	Arrangement	Diameter μ	Length μ	Form	Marking
Smooth or nearly so	4–7–8	Loosely Parallel	2.3–3.7 –4.0	9.1–14.8 –15.6	Acute Type, Somewhat Tapered	Smooth or nearly so
〃	2–5	Loosely Compact	2.1–2.8	9.3–12.5	〃	〃
Smooth or nearly so	3–5	Somewhat Divergent	2.5–4.5	15.0 –29.0	Acute Type	〃
〃	2–5	〃	3.1–4.7	10.6 –18.0	〃	
Smooth or nearly so	3–5–7	Loosely Compact	2.1–3.1 –3.5	9.0–11.2 –12.5	Acute Type	Smooth or nearly so
Delicately Echinulate	3–6	Loosely Compact	2.5–3.6	10.6 –14.3	〃	〃
Smooth or nearly so	3–5	〃	2.0–3.0	6.8–9.3	〃	〃
Spinulose	3–6	Compact	2.5–3.2	8.7–10.6	〃	Smooth or Slightly Punctate
Smooth or nearly so	3–6	Loosely Compact	1.8–3.0	10.6 –13.1	〃	Smooth or nearly so

compactum series.

Smooth or nearly so	4–6	Compact or More or less Inflated.	2.1–3.0	7.5–10.0	Acute Type	Smooth or nearly so
Echinulate or Verruculose	3–6–8	Compact	2.1 –3.3	8.3–10.2 –12.5	〃	〃
〃	4–7	Compact	2.1–2.6	9.3–11.2	〃	〃

Table M-12. (Continued)

Species and Varieties	Metulae: Usual Number	Arrangement	Apices μ	Diameter μ	Length μ	Marking
P. oxalicum Currie *and* Thom	2–3–4	Loosely Paralled	3.0–5.0 –5.3	2.9–4.1	13.3 –23.7 –25.0	Smooth or nearly so
P. atramentosum Thom	2–4	More or less Divergent	2.3–3.0	2.1–2.9	9.3–13.7	〃

Table M-12. (2) (Continued)

P. digitatum Saccardo	3–5	More or less Divergent	3.0–6.0	2.5–5.6	15.0 –31.0	Smooth or nearly so
P. digitatum Saccardo var. latum Abe	2–4	Compact, Somewhat Divergent	4.3–6.3	3.1–5.6	12.0 –20.0	〃

Table M-12. (3) (Continued)

P. roqueforti Thom	2–5–6	Loosely Compact. Somewhat divergent	3.0–4.8 –5.6	2.4–4.2 –4.4	8.4–15.6 –16.0	Granular or Punctate
P. roqueforti Thom *var. punctatum* Abe	2–5	〃	3.4–4.7	3.1–4.5	12.5 –18.7	Smooth or Punctate
P. casei Staub	2–5	Loosely Compact	3.4–4.7 –5.0	2.8–4.4	8.1–12.5	Punctate or Granular
P. casei Staub *var. compactum* Abe	2–3	Compact or Loosely Compact	3.7–5.0	2.5–4.3	6.2–11.2	Granular
P. pseudo-casei Abe	3–5	Loosely Compact	3.1–4.6	2.5–4.1	10.6 –13.6	Granular

Table M-13. (Continued)

P. brevi-compactum Dierckx	3–4	Compact	3.7–6.2	3.1–4.6	5.0–9.4	Smooth or nearly so
P. stoloniferum Thom	3–4–6	Parallel, Slightly Divergent	3.1–5.0 –6.2	2.8–4.0 –4.7	8.1–12.0 –22.0	〃
P. brunneo-stoloniferum Abe	3–6	Compact	3.7–5.0	3.1–3.7	9.3–12.5	〃

Branches				Conidiphores			
Apices μ	Diameter μ	Length μ	Marking	Apices μ	Diameter μ	Length μ	Marking
3.2–5.0 –6.0	3.0–4.0 –4.5	13.0 –22.0 –24.2	Smooth or nearly so	3.5–5.3 –6.2	3.2–4.3 –4.7	80–200 –380	Smooth or nearly so
2.3–3.0	2.1–2.9	8.0–18.0	〃	2.8–3.8	2.7–3.6	60–120	〃
3.0–6.2	2.4–5.7	15.0 –28.0	Smooth or nearly so	4.2–6.1	4.0–5.5	60–200	Smooth or nearly so
3.7–6.2	3.1–5.3	12.0 –18.7	〃	4.3–6.2	4.0–5.0	60–320	〃
3.4–5.0 –6.3	3.1–4.4 –4.8	12.5 –18.9 –31.0	Protuberculate or Granular	3.9–6.3 –7.5	3.6–5.6	60–120 –700	Protuberculate or Granular
3.7–5.0	3.1–4.7	12.5 –31.0	Punctate, Small Granular	4.3–5.6	4.3–5.3	120–380	Punctate or Smaller Granular
3.7–4.7 –6.2	3.1–4.3 –5.0	9.3–21.0 –25.0	Protuberances or Granular	4.0–6.3 –7.5	3.2–5.6	90–200 –380	Protuberances or Granular
5.0–6.2	4.4–6.0	9.3–15.6	〃	5.0–6.9	4.4–6.2	60–300	〃
3.1–5.3	2.5–4.4	15.6 –34.0	〃	3.7–5.6	3.1–4.7	120–250	〃
5.0–6.3	3.1–5.6	6.2–17.6	Smooth or nearly so	4.6–6.2	3.7–5.0	250–600	Delicately Roughened
3.7–5.0 –6.3	3.0–4.2 –4.7	9.5–18.5 –25.0	〃	3.9–6.1 –6.3	3.0–5.0 –5.1	120–300 –380	Smooth or Slightly Punctate
3.8–5.0	3.1–4.3	17.5 –18.7	〃	4.4–6.2	4.1–5.0	120–220	Small Punctate

Table M-14. Microscopic characteristics on conidial stage of the *P. ochraceum*

Species and Varieties	Conidial Chain			Conidia	
	Colony μ	Slant μ	Form	Size μ	Form
P. ochraceum Thom	30–120	60–180	Tangled or Loosely Parallel	2.5–3.8	Globose or Subglobose

Table M-14. (2) 〃 of the *P. crustosum series.*

P. crustosum Thom	60–180 –320	120–330 –400	Tangled or Loosely Parallel	2.5–3.8 –4.4	Globose or Subglobose

Table M-14. (3) 〃 of the *P. viridi-cyclopium series.*

P. viridicatum Westling	30–160 –250	120–300 –380	Tangled or Parallel	2.1–3.1 –4.1	Globose or Ovate, Subglobose
P. viridi-cyclopium Abe	50–120 –300	120–300 –400	Loosely Tangled, Parallel	2.5–3.4 –3.8	Globose or Subglobose
P. olivino-viride Biourge	60–160 –300	60–150 300–400	Loosely Parallel, Tangled	2.8–4.1 –4.4	〃
P. palitans Westling	120–380	120–380 –400	Tangled, Loosely Parallel	2.8–4.2	〃
P. puberulum Bainier	90–150 –200	90–250 –300	Loosely Column or Parallel	2.5–3.8 –4.0	〃
P. cyclopium Westling	60–120 –250	60–260 –400	〃	2.8–4.1 × 2.1–3.2	Elliptical, Ovate or Subglobose
P. aurantio-virens Biourge	60–150 –190	60–260 –320	Loosely Tangled or Parallel	3.1–4.7 × 2.6–4.0	Elliptical or Ovate
P. palitans Westling *var. echinoconidium* Abe	60–120	60–190	Tangled or Loosely Parallel	3.1–4.3	Globose or Subglobose
P. cyclopium Westling *var. echinulatum* Raper *and* Fennell	190–260	140–300	Loosely Column or Parallel	3.1–4.4	〃

series.

			Sterigmata			
Marking	Usual Number	Arrangement	Diameter μ	Length μ	Form	Marking
Slightly Spinulose	4–6	Loosely Compact	1.8–2.6	7.6–9.6	Acute Type	Smooth or nearly so
Smooth or nearly so	3–5–6	Loosely Compact, Parallel	2.1–3.2 –3.6	8.7–11.3 –12.5	Acute Type	Smooth or nearly so
Smooth or nearly so	3–6	Loosely Compact	1.8–2.7 –3.7	8.1–10.0 –12.5	Acute Type	Smooth or nearly so
〃	3–6–7	Compact, Loosely Compact	2.1–3.0 –3.1	8.1–10.6 –12.5	〃	〃
〃	3–6	Loosely Compact	2.1–3.0 –3.7	8.1–10.6 –11.3	〃	〃
〃	3–6	〃	2.5–3.6	9.3–12.5	〃	〃
〃	4–6–7	〃	2.5–3.3 –3.4	10.0 –11.3 –12.5	〃	〃
〃	4–7	〃	2.1–3.1 –3.4	8.7–10.0 –12.5	〃	〃
〃	3–5	〃	2.3–3.4 –3.6	9.3–11.9 –12.5	〃	〃
Echinulate or Verruculose	4–8	〃	2.5–3.1	10.0 –11.9	〃	Granular
〃	3–6	〃	2.5–3.5	10.0 –11.2	〃	〃

M-14. (1) (Continued)

Species and Varieties	Metulae				
	Usual Number	Arrangement	Apices μ	Diameter μ	Length μ	Marking
P. ochraceum Thom	4–6	Loosely Compact	2.2–3.0	2.0–2.7	9.5–12.0	Punctate

M-14. (2) (Continued)

P. crustosum Thom	2–4–5	Loosely Compact	3.0–4.3 –4.8	2.5–4.1 –4.5	9.3–15.6 –18.7	Granular

M-14. (3) (Continued)

P. viridicatum Westling	2–4–5	Loosely Compact	2.5–3.8 –5.0	2.2–3.5 –3.8	8.7–15.6 –17.0	Granular
P. viridi-cyclopium Abe	2–5	〃	2.8–4.0	2.5–4.0 –4.5	7.5–14.0 –15.6	Smooth or nearly so
P. olivino-viride Biourge	3–4–5	〃	3.0–4.7 –5.6	2.5–4.0 –4.4	9.3–15.6	Smooth or Punctate, Granular
P. palitans Westling	3–5	〃	3.1–5.0	2.8–4.7	9.3–18.7	〃
P. puberulum Bainier	3–5	〃	4.0–5.0 –5.3	3.7–4.5 –4.7	9.3–12.5 –14.4	〃
P. cyclopium Westling	2–5–6	〃	3.1–4.3 –4.6	2.8–4.0	8.7–12.5 –13.7	Granular or Punctate
P. aurantio-virens Biourge	2–4–5	〃	3.1–4.5 –5.0	2.5–4.4	8.1–15.0 –15.6	Smooth or nearly so
P. palitans Westling *var. echinoconidium* Abe	3–5	〃	3.7–4.9	2.8–4.7	9.3–13.7 –18.7	Granular
P. cyclopium Westling *var. echinulatum* Raper *and* Fennell	3–6	Compact	3.1–4.7	2.8–4.1	10.6 –15.0	Granular

Branches				Conidiphores			
Apices μ	Diameter μ	Length μ	Marking	Apices μ	Diameter μ	Length μ	Marking
3.2–4.2	2.8–3.8	12.0 –23.0	Punctate	3.0–4.3	3.5–4.4	120–300	Punctate
3.1–4.8 –6.2	2.8–4.6 –5.2	9.3–23.0 –37.0	Granular	4.0–5.6 –6.3	3.7–5.3 –6.0	60–140 –600	Granular
3.1–4.7 –5.3	2.5–4.5	12.0 –25.0 –37.0	Granular	4.0–5.3 –5.6	3.7–5.0	190–380 –450	Granular
3.4–5.0 –5.8	3.0–4.7 –4.9	9.3–30.0 –37.0	〃	4.0–5.2 –5.8	3.7–4.9 –5.6	120–320 –440	〃
3.5–5.0 –6.0	3.1–4.7 –5.6	11.2 –17.5 –40.0	〃	4.3–5.3 –6.3	4.0–4.9 –5.6	90–260 –380	〃
4.0–5.9	3.7–5.3	12.5 –33.0	〃	4.3–6.3	4.1–5.9	120–380	〃
3.4–5.0 –5.9	3.1–4.7 –5.6	12.5 –18.9 –21.0	〃	3.7–5.0 –6.3	3.4–4.6 –6.2	120–250 –380	〃
3.1–5.0	2.8–4.5 –4.7	9.3–28.0 –31.0	〃	3.7–5.6 –5.9	3.4–5.3 –5.6	120–300 –380	〃
3.4–5.0 –5.4	3.1–4.7 –5.0	9.3–18.7 –29.0	〃	4.0–5.9 –6.8	3.7–5.6 –6.2	120–260 –380	〃
4.3–5.6	3.4–5.0	11.2 –24.0	〃	4.3–6.3	4.3–6.0	120–320	〃
3.1–5.0	2.8–4.3	12.5 –27.8	〃	4.3–5.9	4.1–5.6	200–400	〃

M-14. (4) Microscopic characteristics on conidial stage of the *P. urticae and*

Species and Varieties	Conidial Chain			Conidia	
	Colony μ	Slant μ	Form	Size μ	Form
P. urlticae Bainier	60–120	60–190	Loosely Column or Divergent	2.8–3.6 × 2.1–2.8	Ellpitical
P. expansum (Link) Thom	120–250	200–380	Tangled or Loosely Parallel	3.1–4.4 × 2.5–3.1	〃
P. martensii Biourge	60–130 –200	60–200 –270	Loosely Tangled, Parallel	3.1–4.2 × 2.1–3.3	Ellpitical or Ovate
P. italicum Wehmer	60–180	120–260	Tangled or Loosely Parallel	3.4–5.8 ×2.8–3.7 (Larger: 5.0–8.7 ×3.1–3.8	Cylindrical

Table M-15. (1) Microscopic characteristics on conidial stage of the *P. granulatum*

P. corymbiferum Westling	120–260	120–630	Tangled	2.5–3.5	Globose or Subglobose
P. granulatum Bainier	60–190	60–250	Tangled or Loosely Divergent	3.1–3.8 × 2.5–2.9	Elliptical or Subglobose

M-15. (2) 〃 of the *P. claviforme series.*

P. claviforme Bainier	60–180 –220	120–280 –300	Broady Column or Parallel	2.8–3.8 × 2.2–3.1	Elliptical or Ovate
P. claviforme Bainier *mut. candicans* Abe *and* Ura	120–190	120–200	〃	2.8–3.8 × 2.6–3.2	〃
P. claviforme Bainier *mut. olivicolor* Abe *and* Ura	60–160	120–200	〃	3.0–3.8 × 2.5–3.2	〃
P. clavigerum Demelius	30–120	60–120	Loosely Tangled, Column	3.4–4.4 × 2.6–3.5	Elliptical

italicum series.

Sterigmata						
Marking	Usual Number	Arrangement	Diameter μ	Length μ	Form	Marking
Smooth or nearly so	3–5	Loosely Compact	1.8–2.6	5.3–6.3	Acute Type	Smooth or nearly so
〃	3–6	〃	2.5–3.1	9.3–12.5 –15.6	〃	〃
〃	4–6–7	Compact, Loosely Compact	2.1–3.1	6.8–8.7 –9.4	〃	〃
〃	4–6	Loosely Compact	2.7–3.5	8.3–12.4	〃	〃

series.

Smooth or nearly so	3–7	Loosely Parallel	2.1–3.0	8.7–10.6	Acute Type	Smooth or nearly so
〃	3–5	Loosely Compact	2.4–3.0	9.3–11.2	〃	〃

Smooth or nearly so	2–5	Loosely Compact	2.0–2.9	9.1–12.0	Acute Type	Smooth or nearly so
〃	2–5	〃	2.5–3.5	10.6 –13.7	〃	〃
〃	2–4	〃	2.3–3.1	10.0 –12.5	〃	〃
〃	2–4	〃	2.0–2.5	9.3–12.5	Gradually Tapered,	〃

M-14. (4) (Continued)

Species and Varieties	Metulae					
	Usual Number	Arrangement	Apices μ	Diameter μ	Length μ	Marking
P. urticae Bainier	2–4	Loosely Compact	2.8–3.9	2.5–3.4	6.2–7.5	Smooth or nearly so
P. expansum (Link) Thom	2–4	〃	3.1–4.9	2.8–4.5	10.0 –15.7	〃
P. martensii Biourge	3–4	〃	2.8–4.4	2.5–3.8 –4.1	8.1–12.5	〃
P. italicum Wehmer	2–4	〃	4.0–5.2	3.0–4.2	14.0 –22.0	〃

M-15. (1) (Continued)

P. corymbiferum Westling	3–5	Loosely Compact	3.7–5.0	3.1–4.3	9.3–15.6	Punctate
P. granulatum Bainier	3–4	〃	3.5–4.8	2.5–3.7	8.7–14.0	Granular

M-15. (2) (Continued)

P. claviforme Bainier	2–4	Loosely Compact or Somewhat Divergent	3.0–4.7	2.5–3.6	8.4–13.8	Smooth or nearly so
P. claviforme Bainier *mut. candicans* Abe *and* Ura	3–4	〃	3.7–5.0	2.8–4.4	9.3–15.6	〃
P. claviforme Bainier *mut. olivicolor* Abe *and* Ura	3–4	〃	3.4–4.8	3.1–4.6	11.2 –15.6	〃
P. clavigerum Demelius	2–4	〃	3.1–4.1	2.5–3.5	7.5–12.5	〃

Branches				Conidiophores			
Apices μ	Diameter μ	Length μ	Marking	Apices μ	Diameter μ	Length μ	Marking
3.4–4.7	3.1–4.3	10.6 –22.0	Smooth or nearly so	4.3–5.3	4.0–4.7	180–600	Smooth or nearly so
3.4–4.9	3.2–4.7	12.5 –31.0	〃	4.5–5.6	3.4–5.0	60–390	〃
3.1–4.7	2.9–4.5	11.2 –18.7 –22.0	〃	3.4–5.4 –5.6	3.1–5.0	90–130 –380	〃
4.0–5.5	3.0–4.5	14.0 –27.0	〃	4.2–5.5	3.5–4.8	120–300	〃
4.2–6.0	4.0–5.6	11.0 –30.0	Granular	4.6–6.2	4.0–5.8	60–500	Granular
3.1–5.0	2.5–4.1	10.6 –13.7	〃	4.3–6.3	3.7–5.6	60–380	〃
3.1–5.0	2.8–4.0	9.0–30.0	Smooth or nearly so	4.0–5.8	3.2–5.6	250–430 –700	Smooth or nearly so
3.7–5.2	3.1–4.7	9.3–25.0	〃	4.3–6.3	3.7–5.0	250–630	〃
4.3–6.3	3.7–4.7	12.5 –28.0	〃	4.6–6.3	3.4–4.7	250–700	〃
3.1–4.3	2.5–3.5	6.2–15.6	〃	3.7–4.4	2.8–4.1	2–10mm.	〃

Table M-16. (1) Microscopic characteristics on conidial stage of the *P. luteum*

Species or Varieties	Conidia				
	Conidia Chain			Size μ	Form
	Colony μ	Slant μ	From		
P. wortmanni Klöcker	60-95	60-130	Loosely Tangled	2.8-3.4 × 1.8-2.5	Elliptical or Lemon Shape

Table M-16. (2) 〃 of the *P. duclauxi series.*

P. duclauxi Delacroix	120-200	120-250	Loosely Parallel, Tangled	3.1-4.1 × 2.1-3.0	Elliptical or Fusiform

Table M-16. (3) 〃 of the *P. funiculosum series.*

P. funiculosum Thom	60-260	120-320	Loosely Parallel, Tangled	3.1-3.7 × 2.1-2.6	Fusiform or Elliptical
P. islandicum Sopp	60-90	60-160 -230	Tangled	3.0-4.4 × 2.3-3.7	〃
P. verruculosum Peyronel	30-60-90	30-90 -120	Loosely Parallel or Tangled	2.5-3.5 (3.0-4.5 × 2.6-3.7)	Globose or Ovate, Subglobose
P. varians Smith	30-80 -100	60-120 -300	〃	3.2-4.4 × 2.6-3.6	Ovate or Elliptical

Table M-17. Microscopic characteristics on conidial stage of the *P. purpuro-*

P. purpurogenum Stoll	30-120 -180	90-190 -340	Loosely Parallel or Tangled	2.3-3.8 × 1.6-3.2 Larger: 4.3-6.2 × 3.0-3.2	Elliptical Ovate.
P. rubrum Stoll	40-60 -100	80-180 -200	Loosely Parallel, Divergent	2.5-3.7 × 1.5-3.1	Elliptical, Fusiform or Ovate
P. aculeatum Raper *and* Fennell	30-60	90-130	Loosely Parallel or Tangled	2.1-3.1	Globose or Subglobose
P. aculeatum Raper *and* Thom *var. apiculatum* Abe	30-60-80	30-90 -120	〃	3.0-4.0 × 2.5-3.2	Ovate with one end apiculate
P. purpurogenum Stoll *var. rubri-sclerotium* Thom	60-90 -160	80-190 -300	Loosely Parallel, Tangled	2.5-3.8 × 1.5-3.1	Elliptical or Fusiform
P. variable Sopp	50-70	60-250	〃	3.0-3.8 × 1.7-2.4 (Larger: 4.8 ×2.5-4.8)	〃

series.

Conidia	Sterigmata				
Making	Usual Number	Arrangement	Diameter μ	Length μ	Form
Smooth or nearly so	4–7	Closely Parallel	1.8–2.4	10.0–12.5	Lanceolate
Smooth or nearly so	3–6	Closely Parallel	2.1–2.7	11.0–12.5	Lanceolate
Smooth or nearly so	4–6	Closely Parallel	1.5–2.5	10.0–12.5	Lanceolate
〃	3–5–6	〃	2.1–2.8	6.8–9.3–10.6	Lanceolate Tapered
Echinulate or Granular	4–5–7	〃	2.1–2.8–3.2	9.3–10.6 –11.9	〃
Smooth or nearly so	3–5	Closely Parallel, Divergent	2.5–3.1	9.8–11.9 –17.0	〃

genum series.

Smooth or nearly so	4–8	Parallel	1.7–2.7–4.0	10.0–13.8 –17.5	Lanceolate
〃	5–7–8	Loosely Compact	1.5–1.9–2.5	10.0–11.7 –12.5	〃
Echinulate or Verruculose	6–8	〃	2.1–3.0	9.3–12.5	〃
〃	5–7–8	〃	2.2–3.1	9.3–11.0 –13.1	〃
Smooth or nearly so	4–6–7	Loosely Parallel	1.8–2.4–3.1	10.0–13.2 –15.0	〃
〃	6–7	〃	2.3–3.5	12.1–17.0	〃

Table M-16. (1) (Continued)

Species or Varieties	Sterigmata: Marking	Sterigmata: Usual Number	Metulae: Arrangement	Metulae: Apices μ
P. wortmanni Klocker	Smooth or nearly so	4–7	Compact	3.0–4.2

Table M-16. (2) (Continued)

P. duclauxi Delacroix	Smooth or nearly so	4–6	Closely Parallel	2.8–3.8

Table M-16. (3) (Continued)

P. funiculosum Thom	Smooth or nearly so	4–6	Closely Parallel	2.6–3.7
P. islandicum Sopp	〃	5–6–8	Loosely Compact Somewhat divergent	2.5–3.4
P. verruculosum Peyronel	〃	5–7–9	〃	2.8–3.4–3.7
P. varians Smith	〃	4–6	Slightly Divergent, Compact	2.7–3.7

Table M-17. (1) (Continued)

P. purpurogenum Stoll	Smooth or nearly so	5–8	Closely Parallel	2.3–4.1–4.7
P. rubrum Stoll	〃	6–7–10	Loosely Compact, Divergent	2.3–3.0–4.7
P. aculetum Raper *and* Fennell	Punctate	8–12	Definitely Inflated, Suggestive Divaricate	3.1–4.1
P. aculeatum Raper *and* Thom *var. apiculatum* Abe	Smooth or nearly so	6–10–12	〃	2.5–3.5–4.1
P. purpurogenum Stoll *var. rubri-sclerotium* Thom	〃	6–8–12	Loosely Compact, Somewhat Divergent	2.8–3.3–4.0
P. variable Sopp	〃	8–10	〃	3.0–3.8

Metulae			Conidiophores			
Diameter μ	Length μ	Marking	Apices μ	Diameter μ	Length μ	Marking
2.3–3.0	9.3–12.5	Smooth or nearly so	3.1–4.3	2.5–3.2	95–130	Smooth or nearly so
2.8–3.7	10.6–13.7	Smooth or nearly so	3.7–4.3	3.1–4.2	200–300	Smooth or nearly so
2.3–3.0	8.3–12.5	Smooth or nearly so	3.1–4.1	2.5–3.4	60–120	Smooth or nearly so
2.1–3.1	7.5–9.4 –11.2	〃	2.5–3.4 –3.7	2.3–3.0	20–120	〃
2.5–3.1 –3.4	7.0–10.0 –12.5	〃	3.1–3.9 –4.4	2.5–3.0 –3.5	30–70–130	〃
2.5–3.2	6.2–10.6 –11.0	〃	3.0–4.2 –4.4	2.5–3.3	30–80–120	Smooth or Punctate
2.0–3.0 –4.7	9.3–14.2 –18.8	Smooth or nearly so	3.3–4.4 –6.3	2.5–3.4 –4.1	30–170 –190	Smooth or Slightly Granular
2.0–2.5 –4.0	8.3–12.5 –14.3	〃	3.0–3.3 –5.3	2.0–2.2 –4.5	100–150 –320	Smooth or nearly so
2.5–3.6	10.6–13.8	Punctate	4.0–4.9	2.5–4.1	90–320	Punctate or Small Granular
2.3–3.1 –3.3	9.3–11.3 –12.6	Smooth or nearly so	3.7–4.1 –4.7	2.3–3.2	30–60–200	Smooth or Slightly Granular
2.3–2.9 –3.3	9.3–12.3 –15.0	Punctate	3.7–4.4 –4.6	2.5–3.5 –4.1	80–200 –260	Punctate or Small Granular
2.3–3.5	12.5–16.0	Smooth or nearly so	3.7–4.2	2.8–3.8	120–250	Smooth or nearly so

Table M-18. Microscopic characteristics on conidial stage of the *P. rugulosum*

Species or Varieties	Conidia				
	Conidial Chain			Size μ	Form
	Colony μ	Slant μ	Form		
P. rugulosum Thom	60–90	60–180	Loosely Tangled or Divergent	2.5–3.7 × 1.8–2.8	Elliptical or Ovate
P. concavo-rugulosum Abe	60–120 –250	120–320 –380	Loosely Parallel or Tangled	3.1–4.3 × 2.0–3.0	Strongly Elliptical
P. tardum Thom	60–100 –190	60–180 –260	Loosely Tangled or Divergent	2.8–4.4 × 1.7–2.5	〃
P. diversum Raper *and* Fennell	70–120	90–150	Tangled	1.8–2.6 × 1.5–1.9	Elliptical or Subglobose
P. diversum Raper *and* Fennell *var. aureum*	60–130	90–200	〃	2.3–2.8 × 1.8–2.4	〃

Table M-19. Microscopic characteristics on conidial stage of the *P. herquei*

P. herquei Bainier *and* Sartory	30–80 –160	60–120 –400	Tangled or Loosely Parallel	2.8–4.4 × 1.8–3.0	Long Elliptical, Ragby-ball shape
P. paraherquei Abe	30–90	30–120	〃	2.9–3.3 × 1.8–2.5	Elliptical or Lemon Form
P. estinogenum Komatu *and* Abe	60–130	120–180 –220	〃	3.0–4.0 × 2.5–3.1	Elliptical or Ovate
P. novae-zeelandiae van Beyma	10–40	60–240	Divergent, Loosely Parallel	1.8–2.6	Globose or Subglobose

Table M-20. Microscopic characteristics on conidial stage of the *P. albicans*

Species and Varieties	Conidia				
	Conidial Chain			Size μ	Form
	Colony μ	Slant μ	Form		
P. albicans Bainier	30–120	60–160	Loosely Divergent	4.6–9.3 × 2.1–3.7	Elliptical with basal ends somewhat flattened

series.

Conidia	Sterigmata				
Making	Usual Number	Arrangement	Diameter μ	Length μ	Form
Echinulate or Verruculose	4–5	Closely Parallel	1.8–2.4	8.1–11.2	Acuminate
Smooth or Slightly roughened	4–6	〃	1.8–2.7	11.0–13.0 –14.0	〃
Smooth or nearly so	4–6–8	〃	2.0–2.6 –3.0	9.3–12.5 –14.5	Lanceolate
〃	5–6	〃	1.5–2.2	8.7–10.0	〃
〃	4–6	〃	1.7–2.5	8.1–12.5	〃

series.

Smooth or nearly or	3–6–9	Loosely Compact, Somewhat Divergent	1.8–2.8 –4.0	8.7–10.0 –14.4	Abruptly Tapered Narrowly Beak-like.
Slightly Roughened	4–6	Loosely Compact	2.1–2.8	8.1–10.6	〃
Granular or Verruculose	4–7	Compact	2.1–3.0	8.0.12.0	Narrowly Tips.
Smooth or nearly or	3–6	Loosely Compact	1.7–2.5	10.0–11.2	Lanceolate like

series.

	Sterigmata					
Marking	Usual Number	Arrangement	Dia-meter μ	Length μ	Form	Marking
Smooth or nearly so	3–5	Closely Compact	2.1–3.0	7.5–12.5 –18.0	Tips, Somewhat Narrowed	Smooth or nearly so

Table M-18. (Continued)

Species or Varieties	Sterigmata	Metulae		
	Marking	Usual Number	Arrangement	Apices μ
P. rugulosum Thom	Smooth or nearly so	4–7	Loosely Compact, Somewhat Divergent	2.5–3.5
P. concavo-rugulosum Abe	〃	4–7–8	〃	2.8–3.4 –4.1
P. tardum Thom	〃	5–8–15	〃	2.8–3.4 –5.0
P. diversum Raper *and* Fennell	〃	5–7	〃	2.5–3.6
P. diversum Raper *and* Fennell *var. aureum*	〃	8–15	Definitely Inflated Suggestive Divaricate	2.5–3.2

Table M-19. (Continued)

P. herquei Bainier *and* Sartory	Smooth or nearly so	2–5–10	Suggestive Divaricate	3.1–4.4 –6.0
P. paraherquei Abe	〃	4–7	Loosely Compact, Somewhat Divergent	3.1–4.3
P. estinogenum Komatu *and* Abe	Slightly roughened	4–6	Loosely Compact, divergent	3.3–5.0
P. novae-zeelandiae van Beyma	Smooth or nearly so	4–6	〃	3.0–3.8

Table M-20. (Continued)

Species and Varieties	Metulae					
	Usual Number	Arrange-ment	Apices μ	Dia-meter μ	Length μ	Marking
P. albicans Bainier	3–5	Closely Compact	2.5–4.4	2.4–3.5	7.5–18.7	Smooth or nearly so

Metulae			Conidiophores			
Diameter μ	Length μ	Marking	Apices μ	Diameter μ	Length μ	Marking
2.1–2.8	9.3–12.3	Smooth or nearly so	3.4–4.4	2.3–3.0	120–190	Smooth or nearly so
2.3–3.0 –3.5	10.6–15.2 –17.5	〃	3.1–4.3 –5.0	2.5–3.1 –3.8	60–200 –320	〃
2.1–2.8 –3.4	9.3–12.0 –15.0	〃	3.1–4.7 –4.9	2.3–3.4 –3.8	60–190 –300	〃
2.1–3.1	7.5–12.5	〃	3.0–4.5	2.5–3.4	120–200	〃
2.1–3.0	7.5–12.5	〃	3.1–4.4	2.5–3.5	100–180	〃
2.3–3.1 –5.0	7.5–11.3 –15.6	Smooth or nearly so	3.1–4.4 –6.7	2.5–2.8 –5.3	60–120–280	Granular or Punctate
2.5–4.1	9.3–15.6	〃	4.0–5.6	3.1–4.7	190–380	Granular
2.4–3.6	10.0–15.2	Slightly Roughened	4.0–5.9	2.5–5.2	90–180	Slightly Roughened
2.8–3.7	10.0–11.9	Smooth or nearly so	3.5–4.3	3.0–3.8	60–240	Granular

Branches				Conidiophores			
Apices μ	Diameter μ	Length μ	Marking	Apices μ	Diameter μ	Length μ	Marking
3.0–5.6	2.8–5.0	7.5–25.0	Smooth or nearly so	3.7–6.3	3.0–5.3	20–60 –100	Smooth or nearly so

Table B—1. Biochemical characters in Monoverticillata. (1)

Species or varieties.	Strains No.	Rate of Growth in 10 to 12 days. (mm.) at 5° C	at 15° C	at 25° C	at 30° C	at 37° C	Growth on $NaNO_2$ Agar.	Inhibited *Staph. aureus.*	*B. subtilis*	*E. coli*	*Cand. albicans*
P. sclerotiorum van Beyma	1181	0	16	25	30	0	(−)	−	−	−	−
P. thomii Maire	388	0	8	37	54	37	+	12	12	12	−
P. thomii Maire. *var. flavescens* Abe	340	2	40	80	60	0	+	12	−	−	−
P.cinnamopurpureum Abe	362	0	5	16	22	7	+	12	−	14	−
〃	363	0	2	20	22	8	++	12	−	14	−
P.purpurrescens(*Sopp*) Raper, Thom *and* Fennell	732	3	24	50	55	0	++	14	−	14	−
〃	576	6	32	63	70	0	+	14	−	14	−
P. spinulosum Thom	668	4	47	71	50	0	++	12	−	12	−
〃	639	7	35	75	65	0	++	12	−	12	−
P.lilacino-echinulatum Abe	84	0	22	30	37	0	(−)	22	30	13	−
P. restrictum Gilman & Abbott	779	0	12	31	30	0	+	−	−	−	−
P. fuscum(*Sopp*) Raper. Thom & Fennell	1343	0	7	20	23	0	+	−	−	−	−
P. frequentans Westling	627	6	37	75	60	0	(−)	12	−	14	−
〃	1032	4	40	59	54	0	(−)	12	−	14	−
P.citreo-viride Biourge	1229	0	15	25	25	0	++	12	−	−	12
〃	960	0	14	25	26	0	++	12	−	−	12
P. citreo-viride Biourge *var. aeneum* Abe	124	0	13	22	30	0	++	−	−	−	−
〃	122	0	17	24	25	0	++	−	−	−	−
P. vinaceum Gilman & Abbott	1291	0	8	33	40	0	+	13	−	−	−
P. muticolor G.-M. *and* P.	1208	0	24	42	47	0	(−)	−	−	−	−
〃	1051	0	22	48	50	0	(−)	−	−	12	−

Zone (mm.)			Broth			$FeCl_3$-reaction of ext. soln. by ether		Reducing sub. of ext. soln by ether		Fluorescent Substance	Clarification Activity (mm. PPT)
Mycob. 607	*S. cerevisae.*	*Asp. oryzae.*	pH	N-NaOH cc./100cc.	Mycelia gm./120cc.	Ether	Broth after ext.	20 hrs at 25°C	Boiled		
–	–	–	6.72	0.149	1.034	–	–	–	–	Yellow ++	+++ 3
–	–	–	4.95	1.907	1.649	Yellow PPT+	–	–	–	Yellow +++	++ 3
–	–	–	3.30	1.711	0.217	–	–	–	–	–	+++ 4
–	–	–	5.87	0.538	0.895	Pale Brown±	–	–	–	Yellow ±	+++ 3
–	–	–	7.25	–	0.786	〃	–	–	–	〃	++
–	–	–	4.42	3.472	0.830	–	–	–	–	Yellow ±	++
–	–	–	6.63	0.361	0.830	–	–	–	–	–	+
–	–	–	5.85	0.423	1.074	–	–	–	–	Pale Blue +	++
–	–	–	5.73	0.876	0.606	–	–	–	–	–	++
–	16	–	7.80	–	1.160	–	–	–	–	–	+++ 3
–	–	–	6.99	0.268	0.728	–	–	–	–	Blue +++	++
–	–	–	6.15	0.618	0.968	–	–	–	–	–	++
–	–	–	4.05	3.038	0.728	–	–	–	–	Purple ++	++
–	–	–	3.45	2.858	0.639	–	–	–	–	–	++
–	–	–	5.80	0.685	0.510	–	–	–	–	–	++
–	–	–	5.10	1.842	0.960	–	–	–	–	–	+
–	–	–	3.85	3.645	1.038	–	–	–	–	Yellow ±	++
–	–	–	5.90	1.565	1.272	–	–	–	–	–	++
–	–	–	6.05	0.567	0.849	–	–	–	–	–	++
–	–	–	6.10	0.787	0.880	Pale Green+	Pale Green+	–	–	Yellow +	+++ 3
–	–	–	4.72	1.271	0.997	Bluish-Green ++	+++	++	+++	Yellow +++	+++ 4

Table B—1. Biochemical characters in Monoverticillata. (2)

Species or varieties.	Strains No.	Rate of Growth in 10 to 12 days. (mm.) at 5° C	at 15° C	at 25° C	at 30° C	at 37° C	Growth on $NaNO_2$ Agar.	Inhibited *Staph. aureus.*	*B. subtilis*	*E. coli.*	*Cand. albicans*
P. roseo-purpureum Dierckx	780	0	17	35	30	0	(−)	−	−	−	−
〃	1288	0	15	36	29	0	(−)	−	−	−	−
P. terlikowskii Zaleski	776	0	12	30	34	0	(−)	20	28	12	−
〃	1290	0	18	37	50	0	(−)	27	35	14	−
P. trzebinskii Zaleski	252	2	30	53	14	0	##	12	−	11	−
〃	631	2	18	70	55	0	##	12	−	11	−
P. trzebinskii Zaleski *var. magnum* Sakaguchi *and* Abe	24	3	34	60	39	0	#	−	−	−	−
P. trzebinskianum Abe.	1138	3	28	48	55	0	#	21	21	12	−
〃	728	2	27	42	46	0	#	21	21	12	−
P. fusco-flavum Abe	1081	0	2	8	8	0	#	−	−	11	−
P. lividum Westling	877	5	40	51	40	0	##	14	12	−	−
〃	626	6	35	70	45	0	##	12	12	−	−
P. aurantio-violaceum Biourge	1008	3	30	66	57	0	#	12	12	−	−
〃	561	6	45	75	62	0	##	12	12	−	−
P. chemisinum Biourge	1287	0	13	52	52	42	(−)	−	−	−	−
P. phoeniceum van Beyma	1292	0	13	15	15	0	#	−	12	11	−
P. implicatum Biourge	1218	0	12	35	33	0	(−)	12	12	−	−
〃	807	0	30	37	35	0	(−)	12	12	12	−
P. sublateritium Biourge	328	0	11	24	25	14	(−)	−	−	−	−
〃	367	0	7	25	28	10	(−)	−	−	−	

Zone (mm.)			Broth			$FeCl_3$-reaction of ext. soln. by ether		Reducing sub. of ext. soln by ether		Fluorescent Substance	Clarification Activity (mm. PPT)
Mycob. 607	*S. cerevisae.*	*Asp. oryzae.*	pH	N-NaOH cc./100cc.	Mycelia gm./120cc.	Ether	Broth after ext.	20 hrs at 25°C	Boiled		
–	–	–	6.27	0.446	0.936	–	–	–	–	–	+
–	–	–	4.96	1.076	0.885	–	–	–	–	Yellow +	+
14	–	–	5.19	0.258	0.980	–	–	–	–	–	## 7
14	19	–	6.23	0.412	0.916	–	–	–	–	–	## 4
–	–	–	4.60	2.163	1.199	Orange ##	–	–	–	–	##
–	–	–	3.27	2.103	0.570	Orange +	–	–	–	–	##
–	–	–	5.50	5.868	0.237	–	–	–	–	–	+
–	–	–	4.80	1.185	0.570	Pale-Green ±	±	–	–	Blue ##	+
–	–	–	4.13	4.059	1.107	〃	〃	–	–	–	+
–	–	–	6.68	0.257	0.190	–	–	–	##	–	+
–	–	–	5.20	1.426	0.964	–	–	–	–	–	##
–	–	–	5.40	1.968	0.837	–	–	–	–	–	##
–	–	–	3.60	1.565	0.411	–	–	–	–	Purple +	+
–	–	–	3.76	4.944	1.372	–	–	–	–	–	##
–	–	–	4.15	0.636	1.097	Orange ##	–	–	–	–	##
–	–	–	5.15	0.721	0.607	–	–	–	–	–	##
–	–	–	4.95	3.569	0.945	Pale Green +	–	–	–	Yellow +	## 4
–	–	–	3.73	1.442	0.530	〃	–	–	–	Blue ##	## 4
–	–	–	5.12	0.489	0.773	Pale Green +	–	–	–	–	##
–	–	–	7.15	–	0.968	〃	–	–	–	–	##

Table B—1. Biochemical characters in Monoverticillata. (3)

Species or varieties.	Strains No.	Rate of Growth in 10 to 12 days. (mm.) at 5° C	at 15° C	at 25° C	at 30° C	at 37° C	Growth on $NaNO_2$ Agar.	Inhibited *Staph. aureus.*	*B. subtilis*	*E. coli*	*Cand. albicans*
P. adametzioides Abe	1301	3	33	33	33	0	(−)	—	—	—	—
〃	1302	3	30	39	38	0	(−)	—	—	—	—
P. decumbens Thom	708	0	15	27	25	0	+	—	—	12	—
〃	604	0	11	24	24	0	##	—	—	12	—
P. fellutanum Biourge	767	0	13	25	28	0	##	14	—	14	—
〃	9	0	12	26	27	0	+	15	—	14	—
P. decumbens Thom *var. atro-virens* Abe	329	0	14	28	23	0	##	14	—	—	—
〃	1140	0	10	28	24	0	##	14	—	—	—
P. fellutanum Biourge *var. nigro-castaneum* Abe	623	0	7	23	24	7	(−)	—	—	—	—
〃	624	0	8	23	25	12	(−)	—	—	—	—
P. capsulatum Raper & Fennell	564	0	9	15	12	0	##	—	—	—	—
〃	565	0	2	18	18	0	##	—	—	—	—
P. cyaneum Biourge	741	0	12	25	25	0	+	—	—	—	—
P. charlesii Smith *var. rapidum* Abe	831	4	28	55	43	0	##	—	—	—	—
〃	734	4	26	43	40	0	##	—	—	—	—
〃	806	3	28	39	40	0	##	—	—	—	—
P. velutinum van Beyma	891	0	23	50	48	0	##	—	—	—	—
〃	1121	0	28	39	43	0	##	—	—	—	—

Zone (mm.)			Broth			$FeCl_3$-reaction of ext. soln. by ether		Reducing sub. of ext. soln by ether		Fluorescent Substance	Clarification Activity (mm. PPT)
Mycob. 607	*S. cerevisae.*	*Asp. oryzae.*	pH	N-NaOH cc./100 cc.	Mycelia gm./120 cc.	Ether	Broth after ext.	20 hrs at 25°C	Boiled		
14	—	—	5.86	1.082	0.748	Scarlet ##	Xanthine Orange ##	+	##	—	### 8
14	—	—	5.65	0.824	0.782	〃	〃	+	##	—	###13
—	—	—	4.92	3.814	0.790	—	—	—	—	—	+
—	—	—	5.80	0.669	1.022	—	—	—		Purple ##	+
—	—	—	5.95	1.809	1.137	—	—	—	—	—	+
—	—	—	5.30	0.524	0.690		—	—	—	—	+
—	—	—	7.80	—	1.385	—	—	—	—	—	+
—	—	—	7.25	—	1.246	—	—	—	—	Blue ##	+
—	—	—	7.68	—	1.175	Citrine +	—	—	—	—	+
—	—	—	8.00	—	0.942	〃	—	—	—	—	##
—	—	—	7.70	—	0.936	—	—	##	##	—	##
—	—	—	5.92	0.722	0.872	—	—	—	—	—	##
—	—	—	7.60	—	1.085	—	—		—	—	##
—	—	—	4.90	1.545	0.960	—	—	—	—	—	##
—	—	—	4.86	1.133	1.075	—	—	—	—	—	##
—	—	—	6.15	0.618	1.005	—	—		—	—	##
—	—	—	8.13	—	1.118	—	—	—	—	—	## 4
—	—	—	7.26	—	1.244	—	—	—	—	—	## 4

Table B—2. Biochemical characters in Divaricata.

Species or varieties.	Strains No.	Rate of Growth in 10 to 12 days. (mm.) at 5° C	at 15° C	at 25° C	at 30° C	at 37° C	Growth on $NaNO_2$ Agar.	Inhibited *Staph. aureus.*	*B. subtilis*	*E. coli*	*Cand. albicans*
P. lilacinum Thom	1233	0	16	43	48	5	##	–	12	–	–
〃	1308	0	22	55	55	5	##	–	14	–	–
Spicaria violacea Abbott	1364	0	20	40	42	0	#	–	–	–	–
P. janthinellum Biourge	1156	2	23	57	58	15	##	–	–	–	–
〃	217	2	32	58	56	10	##	–	–	–	–
〃	1097	2	32	47	50	10	##	12	–	–	–
〃	1101	2	20	52	53	10	##	–	–	–	–
P. simplicissimum (*Oud*) Thom	883	4	20	57	67	0	##	–	–	–	–
〃	768	4	25	46	45	0	##	–	–	–	–
P. ochro-chloron Biourge	828	4	23	41	42	0	##	–	–	14	–
〃	906	0	33	52	50	0	##	15	18	15	–
P. piscarium Westling	881	3	20	40	24	0	##	13	–	–	–
〃	905	0	20	34	26	0	#	–	–	–	–
P. miczinskii Zaleski	882	5	32	54	61	0	#	–	–	–	–
〃	908	0	37	58	59	0	##	–	–	–	–
P. nalgiovensis Laxa	1489	0	12	25	24	0	#	12	–	12	–
〃	170	0	14	28	26	0	#	12	–	12	–
P. echinulo-nalgiovensis Abe	907	0	22	37	35	0	##	13	–	14	–
〃	884	0	16	37	45	0	##	13	–	14	–
P. canescens Sopp	832	4	28	75	70	0	##	14	–	–	–
P. jenseni Zaleski	770	3	20	38	42	0	##	–	–	–	–
P. nigricans (Bainier) Thom	948	1	13	22	14	0	(–)	12	–	—	–
P. nigricans (Bainier) Thom *var. sulfuratum* Abe	536	4	23	43	35	0	(–)	–	–	–	–
P. melinii Thom	581	2	23	51	48	0	##	–	14	–	–
〃	992	0	17	52	45	0	##	–	–	–	–

Zone (mm.)			Broth			$FeCl_3$-reaction of ext. soln. by ether		Reducing sub. of ext. soln by ether		Floures-cent Sub-stance	Clarifi-cation Activity (mm. PPT)
Mycob. 607	*S. cerevisae.*	*Asp. oryzae.*	PH	N-NaOH cc./ 100 cc.	Mycelia gm./ 120 cc.	Ether	Broth after ext.	20 hrs at 25°C	Boiled		
–	20	22	8.24	–	1.067	–	–	–	–	–	–
–	24	21	7.75	–	1.040	–	–	–	–	–	–
–	–	–	6.15	0.618	1.038	–	–	–	–	–	–
–	–	–	6.39	0.258	0.980	–	–	–	–	–	## 3
–	–	–	4.98	2.214	0.864	–	–	–	–	–	+
–	–	–	8.37	–	1.170	Citrine +	Citrine +	–	–	–	–
–	12	–	5.18	2.575	1.280	–	–	–	–	–	+
–	–	–	7.75	–	1.136	–	–	–	–	–	##
–	–	–	4.39	4.068	1.066	–	–	–	–	–	##
–	–	–	8.17	–	1.030	–	–	–	+	–	##
–	–	–	8.15	–	0.927	–	–	+	##	–	##
–	–	–	8.08	–	1.177	–	–	–	–	–	+
–	–	–	4.23	7.828	1.138	–	–	–	–	–	–
–	–	–	5.67	1.185	0.822	–	–	–	–	–	##
–	–	–	6.92	0.309	1.343	–	–	–	–	–	+
–	–	–	5.18	1.185	0.964	–	–	–	–	–	–
–	–	–	6.21	1.546	1.024	–	–	–	–	–	–
–	16	–	8.24	–	0.947	–	–	–	–	–	+
–	14	–	4.12	7.622	0.980	Pale-Green +	+	–	–	Yellow ±	##
–	–	–	4.15	3.554	0.395	–	–	–	–	–	## 4
–	–	–	7.97	–	0.899	–	–	–	–	–	##
–	–	–	8.63	–	0.823	–	–	–	–	–	+
–	–	–	7.55	–	1.060	–	–	–	–	–	##
–	–	–	8.20	–	1.116	–	–	–	–	Yellow ##	## 3
–	–	–	8.33	–	0.930	–	–	–	–	–	##

Table B—3. Biochemical characters in Velutina. (1)

Species or varieties.	Strains No.	Rate of Growth in 10 to 12 days. (mm.) at 5° C	at 15° C	at 25° C	at 30° C	at 37° C	Growth on $NaNO_2$ Agar.	Inhibited *Staph. aureus.*	*B. subtilis*	*E. coli*	*Cand. albicans*
P. citrinum Thom	1131	0	5	34	38	0	##	15	14	–	17
〃	513	0	4	36	37	0	##	12	12	–	15
〃	600	0	7	45	45	0	##	21	15	–	17
P. steckii Zaleski	509	0	4	39	36	0	##	19	11	–	–
〃	715	0	5	34	32	0	##	20	13	–	–
P. citreo-virens Abe	319	0	13	47	36	0	##	12	–	–	–
〃	320	0	17	49	43	0	##	12	–	–	–
P. corylophilum Dierckx	706	0	13	34	32	0	##	12	–	–	–
〃	595	0	6	36	33	0	##	12	–	–	–
P. corylophiloides Abe	984	0	9	31	34	0	##	12	–	–	–
〃	308	0	7	29	19	0	##	12	–	–	–
P. paxilli Bainier	1286	0	20	23	22	0	##	14	–	–	–
P. chrysogenum Thom	1020	2	17	48	47	0	(–)	31	30	–	–
〃	914	2	13	37	37	0	(–)	19	26	–	–
〃 (*Occasionally ovate*)	854	2	19	57	55	0	(–)	18	20	–	–
〃	506	2	18	55	45	0	(–)	14	15	–	–
P. chrysogenum Thom *var. fulvescens* Takashima, Arima & Abe	515	2	23	57	44	0	(–)	27	25	–	–
P. meleagrinum Biourge	1222	2	22	56	48	0	(–)	22	28	14	–
P. meleagrinum Biourge *var. viridiflavum* Abe	652	2	14	45	46	0	##	26	28	14	–
〃	803	2	13	44	43	0	##	19	30	14	–
P. notatum Westling	577	2	22	70	55	0	(–)	28	30	14	–
〃	579	2	19	56	47	0	(–)	28	30	14	–
P. cyaneo-fulvum Biounge	699	2	13	68	52	0	(–)	26	25	14	–
〃	573	2	20	50	40	0	(–)	24	26	14	–

Zone (mm.)			Broth			$FeCl_3$-reaction of ext. soln. by ether		Reducing sub. of ext. soln by ether		Fluorescent Substance	Clarification Activity (mm. PPT)
Mycob. 607	*S. cerevisae.*	*Asp. oryzae.*	pH	N-NaOH cc./100cc.	Mycelia gm./120cc.	Ether	Broth after ext.	20 hrs at 25°C	Boiled		
–	–	–	6.67	0.515	1.106	–	–	+	+	Yellow ++	+
–	–	–	8.62	–	1.136	–	Pale Green +	–	–	–	
–	–	–	8.44	–	1.040	Pale Cit. Xan. Org. ++	Pal. Cit. +	–	–	–	
–	–	–	8.48	–	0.880	〃	〃	–	–	–	
–	–	17	7.45	–	1.010	Pale-green ++	+	–	–	Glaucous +++	++
–	–	–	5.25	0.876	0.607	–	–	–	–	Purple +	
–	–	–	5.76	0.721	0.588	–	–	–	–	Purple ++	–
–	–	–	7.63	–	0.905	–	Citrine +	–	–	–	
–	–	–	6.98	0.361	0.920	–	Citrine +	–	–	–	
–	–	–	8.62	–	0.740	–	–	–	–	–	
–	–	15	8.22	–	0.968	–	–	–	–	–	+
–	–	–	7.30	–	1.192	–	–	–	–	Blue +	
–	–	–	7.38	–	0.726	–					++ +
–	–	–	6.70	0.824	0.745	–	–	+	+	–	++ +
–	–	–	8.58	–	0.710	–	Pal. Cit. +	–	–	Light Blue ++	
–	–	–	7.90	–	0.820	–	–	+	+	–	
–	–	–	8.38	–	0.614	–	–	+	+	–	+
–	–	–	8.62	–	0.820	–	–	+	+	–	
–	–	–	7.83	–	0.948	–	–	–	–	–	
–	–	–	8.32	–	0.935	–	–	–	+	–	+
–	–	–	8.18	–	0.790	–	Citrine +	–	–	–	
–	–	–	8.45	–	0.870	–	–	+	+	–	
–	–	–	7.22	–	0.590	–	–	+	+	–	+
–	–	–	6.62	0.515	0.766	–	–	–	–	–	

Table B—3. Biochemical characters in Velutina. (2)

Species or varieties.	Strains No.	Rate of Growth in 10 to 12 days (mm.) at 5° C	at 15° C	at 25° C	at 30° C	at 37° C	Growth on $NaNO_2$ Agar.	Inhibited *Staph. aureus.*	*B. subtilis*	*E. coli*	*Cand. albicans*
P. oxalicum Currie *and* Thom	258	4	40	80	80	65	++	—	13	—	14
〃	834	4	40	83	83	29	++	—	14	—	14
P. atramentosum Thom	1284	11	42	46	45	0	++	—	—	—	- -
P. digitatum Saccardo	1331	3	20	30	25	0	+	12	—	—	—
P. digitatum Saccardo *var. latum* Abe	605	4	30	65	50	0	++	12	- -	—	- -
P. roqueforti Thom	733	17	55	54	53	0	++	—	—	—	- -
〃	1253	15	45	73	53	0	++	- -	- -	- -	-
P. roqueforti Thom *var. punctatum* Abe	314	25	50	58	32	0	+	-	—	-	- -
〃	315	18	53	62	37	0	+	- -	- -	-	-
P. casei Staub	817	7	23	40	36	5	(—)	12	—	14	—
〃	1030	6	22	50	53	10	(—)	12	—	14	—
P. casei Staub *var. compactum* Abe	1276	17	40	34	17	0	(—)	12	12	—	—
P. pseudo-casei Abe	317	13	35	55	40	0	++	—	13	12	—
〃	1166	17	38	53	40	0	++	12	12	12	—
P. brevi-compactum Dierckx	1285	7	20	29	32	0	+	22	—	12	20
P. stoloiferum Thom	815	7	25	42	37	0	++	20	—	12	20
〃	709	8	23	35	34	0	++	20	—	12	20
P. brunneo-stoloniferum Abe	1132	3	20	46	26	0	+	20	—	12	18

Zone (mm.)			Broth			$FeCl_3$ reacion of ext. soln. byether.		Reducing sub. of ext. soln by ether		Fluorescent Substance	Clarification Activity (mm. PPT)
Mycob. 607	*S. cerevisae.*	*Asp. oryzae.*	PH	N-NaOH cc./100cc.	Mycelia gm./120cc.	Ether	Broth after ext.	20 hrs at 25°C	Boiled		
–	–	–	5.05	0.464	0.958	–	–	–	–	Blue +	## 6
–	–	–	3.80	1.288	1.061	–	–	–	–	–	##3.5
–	–	–	7.20	–	0.997	–	–	–	–	–	+
–	–	–	5.25	0.876	0.796	–	–	–	–	–	##
18	–	–	4.60	0.927	1.034	–	–	–	–	–	##15
–	–	–	7.60	–	0.797	–	–	–	–	Blue +	+
–	–	–	7.75	–	0.936	Pink ##	Pale-Pink +	–	–	–	+
–	–	–	8.15	–	0.689	Pale-Pink +	+	–	–	–	## 3
–	–	–	8.40	–	0.738	Pale-Pink ##	+	–	–	–	## 3
–	–	–	8.45	–	0.914	Pale-Pink ##	+	–	–	–	## 3
–	–	–	8.50	–	0.775	–	–	–	–	–	##
–	–	–	8.40	–	0.968	–	–	–	–	Pale Blue +	+
–	–	–	8.55	–	0.878	–	–	–	–	–	##
–	–	–	8.34	–	0.885	–	–	–	–	Pale Violet ##	+
–	–	–	8.55	–	0.932	–	–	–	–	Yellow ##	+
–	–	20	8.30	–	0.924	Brown +	–	–	–	Yellow ##	+
–	–	18	7.70	–	1.125	Brown +	–	–	–	Yellow ##	+
–	–	20	8.35	–	0.941	Purple-Red ##	+	–	–	Yellow ##	+

Table B—4. Biochemical characters in Fasciculata. (1)

Species or varieties	Strains No.	Rate of Growth in 10 to 12 days (mm.) at 5° C	at 15° C	at 25° C	at 30° C	at 37° C	Growth on $NaNO_2$ Agar.	Inhibited *Staph. aureus.*	*B. subtilis*	*E. coli*	*Cand. albicans*
P. ochraceum Thom	766	12	30	45	40	0	(−)	−	−	−	−
P. crustosum Thom	703	10	35	49	47	0	(−)	−	−	−	−
〃	1058	8	30	55	38	0	(−)	−	−	−	−
〃	318	8	38	68	53	0	(−)	−	−	−	−
P. viridicatum Westling	818	20	35	47	29	0	(−)	−	−	−	−
〃	1273	20	40	52	41	0	(−)	−	−	12	−
P. viridi-cylcopium Abe	843	13	40	37	19	0	(−)	19	20	18	−
〃	998	7	22	30	23	0	(−)	23	21	24	−
P. olivino-viride Biourge	636	22	52	60	46	0	(−)	12	12	−	−
〃	373	20	40	44	10	0	(−)	12	−	12	−
P. palitans Westling	985	20	55	42	28	0	(−)	12	−	12	−
〃	838	17	45	50	33	0	(−)	12	12	12	−
P. puberulum Bainier	1304	11	38	50	48	0	(−)	12	−	13	−
〃	1262	10	34	41	25	0	(−)	13	−	12	−
P. palitans Westling *var. echinoconidium* Abe	848	13	38	50	38	0	(−)	12	−	12	−
〃	1019	13	40	53	27	0	(−)	11	−	13	−
P. cyclopium Westling *var. echinulatum* Raper & Fennell	987	8	42	50	28	0	(−)	−	−	−	−
P. cyclopium Westling	1052	12	42	43	21	0	(−)	15	−	12	−
〃	840	20	40	60	42	0	(−)	18	−	14	−
P. aurantio-verens Biourge	1226	10	45	48	23	0	(−)	12	−	14	−
〃	334	8	35	48	12	0	(−)	12	−	13	−
〃	887	12	45	44	27	0	(−)	12	−	12	14

Zone (mm.)			Broth			$FeCl_3$ reaction of ext. soln. by ether		Reducing sub. of ext. soln by ether			
Mycob. 607	*S. cerevisae.*	*Asp. oryzae.*	pH.	N-NaOH cc./100cc.	Mycelia gm./120cc.	Ether	Broth after ext.	20 hrs at 25°C	Boiled	Fluorescent Substance	Clarification Activity (mm. PPT)
–	–	–	7.28	–	1.269	Pale-Brown +	+	–	–	–	+
–	–	–	8.55	–	0.936	–	–	–	–	–	+
–	–	–	7.86	–	0.804	Orange ++	++	–	–	–	+
–	–	–	8.20	–	0.973	–	–	–	–	–	+
–	–	–	4.45	2.266	0.789	Blackish-Brown ++	++	–	–	–	++ 3
–	–	–	5.02	0.103	0.921	Blackish-Brown ++	++	–	–	–	++ 4
–	18	15	5.75	0.515	0.986	Brown ++	++	–	–	–	++ 4
–	20	16	6.38	0.288	0.716	Reddish-Brown ++	++	–	–	–	++ 4
–	–	–	6,32	0.412	0.885	–	–	–	–	Pale Yellow +	++ 3
–	–	–	7.30	–	0.880	–	–	–	–	–	++ 3
–	–	–	7.43	–	0.995	Pale Pink +	Pale Brown +	–	–	–	++ 3
–	–	–	7.15	–	0.849	–	–	–	+	–	++ 3
–	–	–	7.63	–	0.804	Scarlet ++	Pale Red +	–	–	Pale Yellow +	++ 3
–	–	–	6.98	0.103	0.847	Scarlet ++	Pale Red +	–	–	Blue +	+
–	–	–	6.45	0.206	1.004	–	–	–	–	–	++
–	–	–	7.10	–	1.104	–	–	–	+	–	++
–	–	18	5.80	0.515	1.000	–	–	–	–	–	++ 3
–	–	–	6.50	0.206	1.246	Green ++	+	–	–	–	++
–	–	–	5.03	1.288	1.206	Blackish-Brown ++	++	–	+	–	++
–	–	–	5.86	0.566	0.763	Pale-Green ++	+	–	–	Purple ++	+
–	–	–	6.72	0.309	0.916	Green ++	Pale Green ++	–	–	Purple ++	+
–	–	–	7.78	–	0.906	Pale-Pink +	+	–	–	Yellow +	+

Table B—4. Biochemical characters in Fasciculata. (2)

Species or varieties.	Strains No.	Rate of Growth in 10 to 12 days. (mm.) at 5° C	at 15° C	at 25° C	at 30° C	at 37° C	Growth on $NaNO_2$ Agar.	Inhibited *Staph. aureus.*	*B. subtilis*	*E. coli*	*Cand. albicans*
P. urticae Bainier	1314	8	20	32	32	0	(−)	20	26	20	−
〃	1315	6	20	32	32	0	(−)	26	32	25	−
P. expansum (Link) Thom	736	11	50	61	40	0	(−)	28	32	27	−
〃	740	10	50	60	45	0	(−)	17	22	−	−
P. martensii Biourge	305	13	32	30	15	0	##	24	22	23	−
〃	1201	4	20	53	53	0	##	20	24	18	16
P. italicum Wehmer	774	10	50	47	40	0	##	−	−	−	−
P. corymbiferum Westling	606	8	38	42	23	0	(−)	14	−	−	−
P. granulatum Bainier	852	7	32	65	22	0	(−)	12	−	−	−
P. claviforme Bainier	554	8	55	68	48	0	(−)	28	35	30	16
〃	739	15	44	61	37	0	(−)	18	30	20	14
P. claviforme Bainier *mut. candicans* Abe *and* Ura	1277	15	50	64	40	0	(−)	27	32	28	15
P. claviforme Bainier *mut. olivicolor* Abe *and* Ura	1278	15	50	65	57	0	(−)	29	37	29	15
P. clavigerum Demelius	1161	7	22	35	35	0	##	−	−	−	−

Zone (mm.)			Broth			$FeCl_3$-reaction of ext. soln. by ether		Reducing sub. of ext. soln by ether		Fluorescent Substance	Clarification Activity (mm. PPT)
Mycob. 607	*S. cerevisae.*	*Asp. oryzae.*	PH	N-NaOH cc./100 cc.	Mycelia gm./120 cc.	Ether	Broth after ext.	20 hrs. at 25°C	Boiled		
20	20	–	7.65	–	0.666	Violet-Purple ##	Brown ##	–	–	–	## 3
32	20	–	7.75	–	0.630	〃	〃	–	–	–	## 3
35	30	15	6.30	0.257	0.538	–	–	–	–	–	##
–	–	–	7.95	–	0.908	Brown ##	Brown ##	–	–	–	+
20	20	14	6.22	0.567	0.858	–	–	–	–	–	+
20	16	14	5.63	1.030	0.628	–	Pale-Brown +	–	–	–	## 3
–	–	–	4.70	1.309	0.750	–	–	–	–	Blue +	##16
–	–	–	8.45	–	1.029	–	–	–	–	Pale-Yellow ±	+
–	–	–	6.30	0.257	1.020	–	–	–	–	–	+
35	40	20	6.60	0.257	0.834	–	–	–	–	Pale-Yellow +	## 3
20	28	16	6.70	0.257	0.640	–	–	–	–	Pale-Yellow +	+
25	30	16	7.00	–	0.877	–	–	–	–	–	## 3
35	30	20	6.66	0.103	0.581	–	–	–	–	–	## 4
–	–	–	4.36	1.236	0.911	Brown ##	Brown ##	–	–	–	+

Table B—5. Biochemical in Symmetrica. (1)

Species or varieties.	Strains No.	Rate of Growth in 10 to 12 days. (mm.) at 5° C	at 15° C	at 25° C	at 30° C	at 37° C	Growth on $NaNO_2$ Agar.	Inhibited *Staph. aureus.*	*B. subtilis*	*E. coli*	*Cand. albicans*
P. wotmanni Klocker	364	0	4	30	35	12	+	–	–	–	–
P. duclauxi Delacroix	1293	0	11	32	28	3	++	–	12	–	16
P. funiculosum Thom	71	0	23	60	70	8	(–)	12	23	–	–
〃	1267	0	17	67	72	10	(–)	12	18	–	–
P. islandicum Sopp	946	0	4	22	27	23	(–)	13	–	–	–
〃	1270	0	6	34	37	19	(–)	14	–	12	–
P. verruculosum Peyronel	1114	0	13	66	58	23	++	13	–	–	–
〃	961	0	15	45	45	40	++	12	13	14	–
〃	665	0	10	35	34	33	++	13	–	–	–
P. varians Smith	1209	0	11	48	53	38	++	14	17	15	14
〃	379	0	3	16	18	5	++	12	–	12	–
P. purpurogenum Stoll	1143	0	6	32	37	12	++	12	–	–	–
〃	76	0	2	24	30	18	++	13	–	–	–
P. rubrum Stoll	1154	0	3	10	10	3	++	13	–	–	–
〃	1145	0	5	21	26	17	++	12	–	–	–
P. aculeatum Raper & Fennell	810	0	8	45	54	10	++	13	–	–	–
P. aculeatum Raper & Fennel *var. apiculatum* Abe	1152	0	10	41	40	5	++	13	–	–	–
〃	1189	0	10	50	55	5	++	12	–	–	–
P. purpurogenum Stoll *var. rubri-sclerotium* Thom	1210	2	28	65	74	12	++	13	21	11	–
〃	325	2	25	56	64	8	++	12	22	12	12
〃 (*Non-sclerotigenic* (*type*	1148	0	20	57	64	6	++	13	14	–	–
〃	562	0	22	78	68	9	++	13	18	–	–

Zone (mm.)			Broth			$FeCl_3$-reaction ext. of soln. by ether		Reducing sub. of ext. soln by ether		Fluorescent Substance	Clarification Activity (mm. PPT)
Mycob. 607	*S. cerevisae.*	*Asp. oryzae.*	pH	N-NaOH cc./100 cc.	Mycelia gm./120 cc.	Ether	Broth after ext.	20 hrs at 25°C	Boiled		
–	–	–	6.35	0.206	1.053	–	–	–	–	Pale Blue ##	+
–	25	18	6.55	0.515	1.178	–	–	+	+	–	+
18	–	18	6.18	0.155	1.180	–	–	–	–	–	+
18	–	18	6.65	0.361	0.983	–	–	–	–	–	## 4
–	–	–	6.25	0.258	0.959	–	–	–	–	–	+
–	–	–	6.65	0.618	0.916	–	–	–	–	–	## 5
–	–	–	6.47	0.412	0.768	–	–	–	–	–	+
17	–	20	6.90	0.155	1.035	–	–	–	–	–	## 4
–	–	–	4.45	0.515	0.462	–	–	–	–	Pale Blue + Yellow	+
14	–	–	5.00	0.258	0.844	Pink +	–	–	–	## Blue-purple	+
12	–	30	6.30	0.309	0.478	–	–	–	–	##	+
–	–	–	5.85	0.876	0.872	–	–	–	–	–	+
–	–	–	6.50	0.618	0.895	–	–	–	+	– Blue	+
–	–	–	4.60	1.339	1.053	–	–	–	+	##	+
–	–	–	6.86	0.309	0.435	–	–	–	–	–	+
–	–	–	5.33	0.927	0.502	–	–	–	–	Blue ##	+
15	–	16	4.35	1.030	1.230	–	–	–	–	Pale Yellow +	## 3
16	–	15	4.80	0.618	1.294	–	–	–	–	Pale Yellow +	## 3
16	–	20	5.45	0.824	0.714	Pale Pink +	–	–	–	–	+
20	–	20	5.40	0.824	0.886	Pale Pink + Brown	– Brown	–	–	–	+
14	–	20	4.90	1.545	0.924	##	##	+	##	–	+
18	–	20	4.10	1.545	0.603	〃	〃	+	##	Yellow ##	+

Table B—5. Biochemical characters in Symmetrica. (2) and Polyverticillata.

Species or varieties.	Strains No.	Rate of Growth in 10 to 12 days. (mm.) at 5° C	at 15° C	at 25° C	at 30° C	at 37° C	Growth on $NaNO_2$ Agar.	Inhibited *Staph. aureus.*	*B. subtilis*	*E. coli*	*Cand. albicans*
P. variable Sopp	942	0	14	46	46	4	++	–	–	–	–
〃	1175	0	12	42	44	19	++	13	–	–	–
P. rugulosum Thom	322	2	7	22	21	0	++	13	–	–	–
〃	375	2	8	21	22	0	++	13	–	–	–
P. concavo-rugulosum Abe	672	0	7	37	40	0	++	12	–	–	–
〃	744	0	8	37	37	0	++	13	–	–	–
P. tardum Thom	1183	0	10	32	37	0	++	18	18	17	–
〃	939	0	8	24	28	0	++	16	18	16	–
〃	169	0	6	24	22	0	++	13	–	–	–
P. diversum Raper & Fennell	1294	0	1	4	3	0	++	13	–	–	–
P. diversum var. aureum Raper *and* Fennell	1295	0	4	19	10	0	++	14	–	–	–
P. herquei Bainier & Sartory	958	0	10	43	43	0	++	13	–	–	–
〃	954	0	10	28	23	0	++	12	–	–	–
〃	1313	0	5	25	23	0	++	15	14	20	20
P. paraherquei Abe	964	2	20	50	52	0	++	12	14	–	14
〃	824	2	30	60	62	0	++	15	15	–	15
P. estinogenum Komastu & Abe	1196	2	22	50	22	0	++	20	22	–	–
〃	1195	2	16	40	18	0	++	13	21	–	–
P. novae-zeelandiae van Bayma	1296	3	20	35	36	0	++	–	–	15	–
Polyverticillata											
P. albicans Bainier	1316	0	4	40	30	0	(–)	13	–	–	–

Zone (mm.)			Broth			$FeCl_3$-reaction ext. of soln. by ether		Reducing sub. ext. soln by ether		Fluorescent Substance	Clarification Activity (mm. PPT)
Mycob. 607	*S. cerevisae.*	*Asp. oryzae.*	pH	N-NaOH cc./100cc.	Mycelia gm./120cc.	Ether	Broth after ext.	20 hrs at 25°C	Boiled		
–	18	16	4.90	0.618	0.916	–	–	–	–	–	+
–	20	16	5.38	0.515	0.910	–	–	–	–	–	+
–	–	–	7.27	–	1.170	Pale Brown +	–	–	–	Purple ++	+
–	–	–	6.56	0.309	0.804	Pale Brown +	–	–	–	Purple ++	+
–	18	26	5.26	0.206	1.258	–	–	–	–	Pale Yellow +	+
–	20	20	4.62	0.824	1.040	–	–	–	–	Yellow +++	+
16	–	–	6.46	0.206	1.572	–	–	–	–	Pale Blue +	+
16	–	–	6.72	0.155	1.240	–	–	–	–	–	+
–	–	–	6.82	0.103	1.152	–	–	–	–	Pale Blue +	+
–	–	–	7.10	–	0.274	–	–	–	–	–	+
–	–	–	4.13	0.978	0.342	–	–	–	–	Pale Yellow +	+
–	–	20	7.10	–	1.113	–	–	–	–	–	+
–	–	19	4.50	1.339	0.739	–	–	–	–	Pale Blue +	+
–	–	–	4.15	2.575	0.744	Brown +	Brown +	–	–	–	+
–	–	–	4.80	0.927	1.206	–	–	–	–	Pale Blue ++	+
–	–	–	7.38	–	1.196	Pale-Pink +	++	–	–	Blue-Purple +++	+++ 5
–	–	–	7.16	–	0.984	–	–	–	–	Blue ++	++
–	–	–	6.46	0.258	1.010	–	–	–	–	Blue +++	+
–	–	–	7.75	–	1.276	–	–	–	–	–	++
–	–	–	6.78	0.155	0.303	–	–	–	–	Purple +	+

Table S-1. (1) In the strains of Monoverticillata, color and color changes of broth

Species and Varieties	Strain No.	Broth.	Color and Color pH 2.
P. sclerotiorum van Beyma.	1181	Mars Yellow.	Raw Sienna.
P. thomii Maire.	388	Light Orange Yellow.	Picric Yellow.
P. thomii Maire *var. flavescens* Abe.	340	Uncolor or Naphthalene Yellow.	Uncolor or Naphthalene Yellow.
P. cinnamopurpureum Abe.	362	Rufous.	Bittersweet Pink. PPT. Morocco Red.
〃	363	Bittersweet Orange.	〃
P. purpurrescens (*Sopp*) Raper Thom *and* Fennell.	732	Picric Yellow.	Martius Yellow.
〃	576	Cream Buff.	Cream Buff.
P. spinulosum Thom.	668	Massicot Yellow.	Massicot Yellow.
〃	639	Cream Color.	Naphthalene Yellow.
P. lilacino-echinulatum Abe.	84	Maize Yellow	Massicot Yellow.
P. restrictum Gilman & Abbott.	779	Citrine Yellow.	Straw Yellow. PPT.-Colonial Buff.
P. fuscum (*Sopp*) Raper, Thom *and* Fennell.	1343	Uncolor.	Uncolor.
P. frequentans Westling.	627	Ivory Yellow.	Ivory Yellow.
〃	1032	Uncolor or Napthalene Yellow.	Uncolor or Napthalene Yellow.
P. citreo-viride Biourge.	1229	Light Green Yellow.	Martius Yellow.
〃	960	Bright Chalcedony Yellow.	〃
P. citreo-viride Biourge *var. aeneum* Abe.	124	Amber Yellow.	Citron Yellow.
〃	122	Light Green Yellow.	Pale Viridine Yellow.
P. vinaceum Gilman *and* Abbott.	1291	Baryta Yellow.	Martius Yellow.
P. multicolor Grigorieva Manoilova *and* Poradielova.	1208	Orange Rufous.	Capucine Buff.
〃	1051	Mars Yellow.	Martius Yellow. PPT.-Raw Sienna.

and the the extractions of broth pigments by various solvents at pH's 2, 7 and 9.

changes of Broth.		Extraction of the pigments of broth in acidic or neutral & alkalic by various solvents.						
		Chloroform.			Buthyl Alcohol			Ethyl Ether.
pH 7.	pH 9.	pH 2	pH 7	pH 9	pH 2	pH 7	pH 9	pH 2
Mars Yellow.	Xanthine Orange.	++	—	—	+++	+++	+++	+
Light Orange Yellow.	Light Orange Yellow.	+++	+++	++	+++	+++	+++	+++
Uncolor or Naphthalene Yellow.	Uncolor or Naphthalene Yellow.	/	/	/	/	/	/	/
Apricot Orange.	Apricot Orange.	++	—	—	+++	+	+	+
〃	Grenadine.	++	—	—	+++	+	+	+++
Pale Greenish Yellow.	Pale Greenish Yellow.	+++		—	+++	+++	+++	+++
Warm Buff.	Warm Buff.	+++	—	—	+++	+	+	+++
Cream Color.	Pale Ochraceous Salmon	—	—	—	+++	—	—	+
Cream Color.	Light Ochraceous Buff.	—	—	—	+++	—	—	+++
Maize Yellow.	Pale Orange Yellow.	+	—	·	+	—	—	+
Citron Yellow.	Citron Yellow.	++	—	—	+++	++	++	+++
Uncolor.	Uncolor.	/	/	/	/	/	/	/
Ivory Yellow.	Ivory Yellow.	/	/	/	/	/	/	/
Uncolor or Napthalene Yellow.	Uncolor or Napthalene Yellow.	/	/	/	/	/	/	/
Light Green Yellow.	Light Green Yellow.	+++	+	+	+++	++	++	+++
〃	〃	+++	+++	+++	+++	+++	+++	+++
Amber Yellow.	Antimony Yellow.	+++	+	+	+++	++	++	+
Pale Greenish Yellow.	Pale Greenish Yellow.	+++	+++	+++	+++	+++	+++	+++
Capucine Yellow.	Capucine Yellow.	+	—	—	+++	—	—	+++
Orange Rufous.	Mars Orange.	++	+	+	+++	++	++	+++
Orange Rufous.	Mars Orange.	++	+	+	+++	+	+	+

Table B—5. Biochemical characters in Symmetrica. (2) and Polyverticillata.

Species or varieties.	Strains No.	Rate of Growth in 10 to 12 days. (mm.) at 5° C	at 15° C	at 25° C	at 30° C	at 37° C	Growth on $NaNO_2$ Agar.	Inhibited *Staph. aureus.*	*B. subtilis*	*E. coli*	*Cand. albicans*
P. variable Sopp	942	0	14	46	46	4	##	–	–	–	–
〃	1175	0	12	42	44	19	##	13	–	–	–
P. rugulosum Thom	322	2	7	22	21	0	##	13	–	–	–
〃	375	2	8	21	22	0	##	13	–	–	–
P. concavo-rugulosum Abe	672	0	7	37	40	0	##	12	–	–	–
〃	744	0	8	37	37	0	##	13	–	–	–
P. tardum Thom	1183	0	10	32	37	0	##	18	18	17	–
〃	939	0	8	24	28	0	##	16	18	16	–
〃	169	0	6	24	22	0	++	13	–	–	–
P. diversum Raper & Fennell	1294	0	1	4	3	0	++	13	–	–	–
P. diversum var. aureum Raper *and* Fennell	1295	0	4	19	10	0	##	14	–	–	–
P. herquei Bainier & Sartory	958	0	10	43	43	0	##	13	–	–	–
〃	954	0	10	28	23	0	##	12	–	–	–
〃	1313	0	5	25	23	0	++	15	14	20	20
P. paraherquei Abe	964	2	20	50	52	0	##	12	14	–	14
〃	824	2	30	60	62	0	##	15	15	–	15
P. estinogenum Komastu & Abe	1196	2	22	50	22	0	##	20	22	–	–
〃	1195	2	16	40	18	0	##	13	21	–	–
P. novae-zeelandiae van Bayma	1296	3	20	35	36	0	##	–	–	15	–
Polyverticillata											
P. albicans Bainier	1316	0	4	40	30	0	(–)	13	–	–	–

Zone (mm.)			Broth			$FeCl_3$-reaction ext. of soln. by ether		Reducing sub. ext. soln by ether			
Myc. 607	*S. cerevisae.*	*Asp. oryzae.*	pH	N-NaOH cc./100 cc.	Mycelia gm./120 cc.	Ether	Broth after ext.	20 hrs at 25°C	Boiled	Fluorescent Substance	Clarification Activity (mm. PPT)
–	18	16	4.90	0.618	0.916	–	–	–	–	–	+
–	20	16	5.38	0.515	0.910	–	–	–	–	–	+
–	–	–	7.27	–	1.170	Pale Brown +	–	–	–	Purple ++	+
–	–	–	6.56	0.309	0.804	Pale Brown +	–	–	–	Purple ++	+
–	18	26	5.26	0.206	1.258	–	–	–	–	Pale Yellow +	...
–	20	20	4.62	0.824	1.040	–	–	–	–	Yellow +++	+
16	–	–	6.46	0.206	1.572	–	–	–	–	Pale Blue +	+
16	–	–	6.72	0.155	1.240	–	–	–	–	–	+
–	–	–	6.82	0.103	1.152	–	–	–	–	Pale Blue +	+
–	–	–	7.10	–	0.274	–	–	–	–	–	+
–	–	–	4.13	0.978	0.342	–	–	–	–	Pale Yellow +	+
–	–	20	7.10	–	1.113	–	–	–	–	–	+
–	–	19	4.50	1.339	0.739	–	–	–	–	Pale Blue +	+
–	–	–	4.15	2.575	0.744	Brown +	Brown +	–	–	–	+
–	–	–	4.80	0.927	1.206	–	–	–	–	Pale Blue ++	+
–	–	–	7.38	–	1.196	Pale-Pink +	++	–	–	Blue-Purple +++	+++ 5
–	–	–	7.16	–	0.984	–	–	–	–	Blue ++	++
–	–	–	6.46	0.258	1.010	–	–	–	–	Blue +++	+
–	–	–	7.75	–	1.276	–	–	–	–	–	++
–	–	–	6.78	0.155	0.303	–	–	–	–	Purple +	+

Table S-1. (2)

Species and Varieties	Strain No.	Color and Color	
		Broth.	pH 2.
P. roseo-purpureum Dierckx.	780	Manthine Orange.	Barium Yellow. PPT.-Bay.
〃	1288	Yellow Ocher.	Amber Yellow. PPT.-Old Gold.
P. terlikowskii Zaleski.	776	Xanthine Orange.	Pinard Yellow. PPT.-Morroco Red.
〃	1290	〃	〃
P. trzebinskii Zaleski.	252	Massicot Yellow.	Napthalene Yellow.
〃	631	Naphthalene Yellow.	Naphthalene Yellow.
P. trzebinskii Zaleski var. magnum Sakaguchi & Abe.	24	Uncolor.	Uncolor.
P. trzebinskianum Abe.	1138	Massicot Yellow.	Barium Yellow.
〃	728	Naphthalene Yellow.	Naphthalene Yellow.
P. fusco-flavum Abe.	1081	Uncolor.	Uncolor.
P. lividum Westling.	877	〃	〃
〃	626	〃	〃
P. aurantio-violaceum Biourge.	1008	Uncolor or Naphthalene Yellow.	Uncolor or Naphthalene Yellow.
〃	561	〃	〃
P. chermisinum Biourge.	1287	Carmine.	Scarlet. PPT.-Hays Maroon.
P. phoeniceum van Beyma.	1292	Garnet Brown.	Barium Yellow-PPT.-Victoria Lake.
P. implicatum Biourge.	1218	Pale Green Yellow.	Massicot Yellow.
〃	807	〃	〃
P. sublateritum Biourge.	328	Cream Buff.	Primrose Yellow.
〃	367	Antimony Yellow.	Straw Yellow.

changes of Broth.		Extraction of the pigments of broth in acidic or neutral & alkalic by various solvents.						
		Chloroform.			Buthyl Alcohol			Ethyl Ether.
pH 7.	pH 9.	pH 2	pH 7	pH 9	pH 2	pH 7	pH 9	pH 2
Orange Rufous.	English Red.	+	–	–	###	##	+	###
Cinnamon Rufous.	Vinaceous Rufous.	+	–	–	###	##	##	###
Mars Orange.	Carmine	##	–	–	###	##	–	###
〃	〃	+	–	–	###	–	–	##
Massicot Yellow.	Wax Yellow.	##	–	–	###	##	##	###
Naples Yellow.	Naples Yellow.	##	–	–	###	##	+	###
Uncolor.	Uncolor.	/	/	/	/	/	/	/
Light Buff.	Antimony Yellow.	###	###	##	###	###	+	###
Light Buff.	Light Buff.	###	###	##	###	###	+	###
Uncolor.	Uncolor.	/	/	/	/	/	/	/
〃	〃	/	/	/	/	/	/	/
〃	〃	/	/	/	/	/	/	/
Uncolor or Naphthalene Yellow.	Light Buff.	/	/	/	/	/	/	/
〃	〃	/	/	/	/	/	/	/
Dark Perilla Purple. PPT. Mars Violet.	Dark Perilla Purple. PPT. Mars Violet.	##	–	–	###	–	–	##
Garnet Brown.	Garnet Brown.	###	–	–	###	##	##	###
Pale Green Yellow.	Baryta Yellow.	+	–	–	###	+	–	–
〃	〃	+	–	–	###	+	–	–
Pinkish Cinnamon.	Cinnamon	+	–	–	###	+	+	###
Antimony Yellow.	Yellow Ocher.	##	–	–	###	+	+	##

Table S-1. (2) (Continued)

Species and Varieties	Extraction of the pigments of							
	Ethyl Ether.		Ethyl Acetate.			Benzene		
	pH 7	pH 9	pH 2	pH 7	pH 9	pH 2	pH 7	pH 9
P. roseo-purpureum Dierckx.	+	+	##	+	+	##	+	+
〃	+	+	##	##	##	+	+	+
P. terlikowski Zaleski.	−	−	##	−	−	##	−	−
〃	−	−	##	−	−	##	−	−
P. trzebinskii Zaleski.	−	−	##	−	−	+	−	−
〃	−	−	##	−	−	+	−	−
P. trzebinskii Zaleski var. magnum Sakaguchi & Abe.	/	/	/	/	/	/	/	/
P. trzebinskianum Abe.	##	##	##	##	##	##	##	##
〃	##	##	##	##	##	##	##	##
P. fusco-flavum Abe.	/	/	/	/	/	/	/	/
P. lividum Westling.	/	/	/	/	/	/	/	/
〃	/	/	/	/	/	/	/	/
P. aurantio-violaceum Biourge.	/	/	/	/	/	/	/	/
〃	/	/	/	/	/	/	/	/
P. chermisinum Biourge.	−	−	##	−	−	+	−	−
P. phoeniceum van Beyma.	+	+	##	+	+	##	−	−
P. implicatum Biourge.	−	−	##	+	−	##	−	−
〃	−	−	##	+	−	##	−	−
P. sublateritum Biourge.	−	−	##	+	+	##	+	+
〃	−	−	##	+	+	−	−	−

broth in acidic or neutral & alkalic by various solvents.

Ligroin			Ethanol			Acetone			Glacial A.A.	Pyridine		
pH 2	pH 7	pH 9	Acidic	pH 7	Alkalic	Acidic	pH 7	Alkalic	pH 7	Acidic	pH 7	Alkalic
−	−	−	++	++	+	++	++	+	++	++	++	++
−	−	−	++	+	−	++	+	−	++	++	++	++
+	+	+	++	++	+	++	++	−	++	++	−	−
−	−	−	++	−	−	++	−	−	++	++	−	−
−	−	−	++	++	++	++	+	−	++	++	++	+
−	−	−	++	++	++	++	+	−	++	++	++	+
/	/	/	/	/	/		/	/		/	/	
++	−	−	++	+	+	++	+	−	++	++		+
++	−	−	++	+	+	++	+	−	++	++	+	
/	/	/	/	/	/	/	/	/	/	/	/	
/	/	/	/	/	/	/	/	/	/	/	/	
/	/	/	/	/	/	/	/	/	/	/	/	/
/	/	/	/	/	/	/	/	/	/	/	/	/
/	/	/	/	/	/	/	/	/	/	/	/	/
−	−	−	++	+	−	++	+	+	++	++	+	−
−	−	−	++	−	−	+	−	−	++	++	++	++
+	−	−	++	+	+	++	+	−	++	++	++	++
+	−	−	++	+	+	++	+	−	++	++	++	++
−	−	−	++	−	−	++	−	−	++	++	+	−
−	−	−	++	+	+	++	−	−	++	++	−	−

Table S-1. (3)

Species and Varieties	Strain No.	Color and Color	
		Broth	pH 2.
P. adametzioides Abe	1301	Naphthalene Yellow	Marquerite Yellow
〃	1302	Massicot Yellow	Barium Yellow
P. decumbens Thom	708	Marquirite Yellow	Marquerite Yellow
〃	604	Uncolor or Ivory Yellow	Uncolor or Ivory Yellow
P. decumbens Thom *var. atro-virens* Abe	329	Pale Chalcedony Yellow	Pale Chalcedony Yellow
〃	1140	Uncolor or Marquerite Yellow	Uncolor or Marquerite Yellow
P. fellutanum Biourge	767	Marquerite Yellow	Marquerite Yellow
〃	9	Uncolor or Marquerite Yellow	Uncolor or Marquerite Yellow
P. fellutanum Biourge *var. nigro-castaneum* Abe	623	English Red	Naphthalene Yellow PPT.-Bay.
〃	624	English Red	Barium Yellow PPT-Victoria Lake
P. capusalatum Raper and Fennell	564	Pinkish Vinaceous	Straw Yellow
〃	565	Yellow Ocher	Barium Yellow
P. cyaneum Biourge	741	Naphthalene Yellow	Chalcedony Yellow
P. charlesii Smith *var. rapidum* Abe	831	Uncolor or Marquerite Yellow	Uncolor or Marquerite Yellow
〃	734	〃	〃
P. velutinum van Beyma	891	Barium Yellow	Napthalene Yellow
〃	1121	Massicot Yellow	〃

changes of Broth.		Extraction of the pigments of broth in acidic or neutral & alkalic by various solvents.						
		Chloroform.			Buthyl Alcohol			Ethyl Ether.
pH 7.	pH 9.	pH 2	pH 7	pH 9	pH 2	pH 7	pH 9	pH 2
Straw Yellow	Straw Yellow	–	–	–	+	–	–	–
Massicot Yellow	Massicot Yellow	–	–	–	##	–	–	–
Pale Pinkish Buff.	Pale Pinkish Buff	/	/	/	/	/	/	/
Uncolor or Ivory Yellow	Uncolor or Ivory Yellow	/	/	/	/	/	/	/
Pale Chalcedony Yellow	Pale Chalcedony Yellow	/	/	/	/	/	/	/
Uncolor or Marquerite Yellow	Uncolor or Marquerite Yellow	/	/	/	/	/	/	/
Cartridge Yellow	Cartrige Yellow	/	/	/	/	/	/	/
Uncolor or Marquerite Yellow	Uncolor or Marquerite Yellow	/	/	/	/	/	/	/
English Red	English Red	##	–	–	##	#	#	##
〃	〃	##	–	–	##	##	#	##
Orange Vinaceous	Orange Vinaceous	–	–	–	+	–	–	+
Yellow Ocher	Raw Sienna	–	–	–	##	–	–	##
Naphthalene Yellow	Cream Color	/	/	/	/	/	/	/
Uncolor or Marquerite Yellow	Uncolor or Marquerite Yellow	/	/	/	/	/	/	/
〃	〃	/	/	/	/	/	/	/
Barium Yellow	Barium Yellow	–	–	–	##	–	–	##
〃	Uncolor	/	/	/	/	/	/	/

Table S-1. (3) (Continued)

Species and Varieties.	Extraction of the pigments of							
	Ethyl Ether.		Ethyl Acetate.			Benzene		
	pH 7	pH 9	pH 2	pH 7	pH 9	pH 2	pH 7	pH 9
P. adametzioides Abe	−	−	++	−	−	−	−	−
〃	−	−	++	−	−	−	−	−
P. decumbens Thom	/	/	/	/	/	/	/	/
〃	/	/	/	/	/	/	/	/
P. decumbens Thom *var. atro-virens* Abe	/	/	/	/	/	/	/	/
〃	/	/	/	/	/	/	/	/
P. fellutanum Biourge	/	/	/	/	/	/	/	/
〃	/	/	/	/	/	/	/	/
P. fellutanum Biourge *var. nigro-castaneum* Abe	−	−	+++	+	+	+++	+	−
〃	+	−	+++	+	+	+++	−	−
P. capusalatum Raper *and* Fennel	−	−	++	−	−	+	−	−
〃	+	−	+++	+	−	+	−	−
P. cyaneum Biourge	/	/	/	/	/	/	/	/
P. charlesii Smith *var. rapidum* Abe	/	/	/	/	/	/	/	/
〃	/	/	/	/	/	/	/	/
P. velutinum van Beyma	−	−	+++	−	−	+	−	−
〃	/	/	/	/	/	/	/	/

broth in acidic or neutral & alkalic by various solvents.

Ligroin			Ethanol			Acetone			Glacial A.A.	Pyridine		
pH 2	pH 7	pH 9	Acidic	pH 7	Alkalic	Acidic	pH 7	Alkalic	pH 7	Acidic	pH 7	Alkalic
−	−	−	##	−	−	+	−	−	##	+	−	−
−	−	−	##	−	−	##	−	−	##	##	−	−
/	/	/	/	/	/	/	/	/	/	/	/	/
/	/	/	/	/	/	/	/	/	/	/	/	/
/	/	/	/	/	/	/	/	/	/	/	/	/
/	/	/	/	/	/	/	/	/	/	/	/	/
/	/	/	/	/	/	/	/	/	/	/	/	/
/	/	/	/	/	/	/	/	/	/	/	/	/
##	−	−	##	##	+	##	##	##	##	##	##	##
##	−	−	##	+	+	##	+	+	##	##		−
−	−	−	##	−	−	+	−	−	##	+	+	+
−	−	−	##	−	−	+	−	−	##	##	##	+
/	/	/	/	/	/	/	/	/	/	/	/	/
/	/	/	/	/	/	/	/	/	/	/	/	/
/	/	/	/	/	/	/	/	/	/	/	/	/
−	−	−	+	−	−	+	−	−	+	##	−	−
/	/	/	/	/	/	/	/	/	/	/	/	/

Table S—2. (1) In the strains of Asymmetrica-Divaricata & Velutina, color and color chan-

Species and Varieties	Strain No.	Color and Color	
		Broth.	pH 2.
P. lilacinum Thom	1233	Naphthalene Yellew	Massicot Yellow
〃	1308	Barium Yellow	Naphthalene Yellow
Spicaria violacea Abbott.	1364	Primuline Yellow	Straw Yellow
P. janthihellum Biourge.	1156	Marquerite Yellow	Naphthalene Yellow
〃	1097	Mars Yellow	Antimony Yellow
P. simplicissimum (Oud) Thom.	883	Uncolor	Uncolor
〃	768	〃	〃
P. ochro-chloron Biourge	828	Marqurite Yellow	Naphthalene Yellow
〃	903	Primrose Yellow	Reed Yellow
P. piscarium Westling.	881	Cream Color	Naphthalene Yellow
〃	905	Naphthalene Yellow	Marqurite Yellow
P. miczinskii Zaleski	882	Uncolor	Uncolor
〃	908	〃	〃
P. nalgiovensis Laxa	1489	Amber Yellow	Martius Yellow
P. echinulo-nalgiovense Abe	907	Ferruginous	Sulphur Yellow PPT-Vinaceous Rufous.
〃	884	Straw Yellow	Naphthalene Yellow. PPT-Light Brownish Yellow
P. canescens Sopp	832	Uncolor	Uncolor
P. jenseni Zaleski	770	Barium Yellow	Sulphur Yellow
P. nigricans (Bainier) Thom	948	Capucine Yellow	Light Orange Yellow. PPT-Flame Scarlet
P. nigricans Thom var. sulfuratum Abe.	536	Grenadine	Peach Red.
P. melinii Thom	992 581	Light Greenish Yellow	Pale Greenish Yellow

ge of broth and the extractions of broth pigments by various solvents at PH's 2, 7 and 9.

changes of Broth		Extraction of the pigments of broth in acidic or neutral & alkalic by various solvents.						
		Chloroform.			Buthyl Alcohol			Ethyl Ether.
pH 7.	pH 9.	pH 2	pH 7	pH 9	pH 2	pH 7	pH 9	pH 2
Massicot Yellow	Naphthalene Yellow	–	–	–	+	–	–	–
Naphthalene Yellow	Straw Yellow	–	–	–	+	–	–	–
Primuline Yellow	Primuline Yellow	##	##	–	##	##	##	##
Marqurite Yellow	Massicot Yellow	###	–	–	###	–	–	##
Mars Yellow	Mars Yellow	–	–	–	##	–	–	+
Uncolor	Uncolor	/	/	/	/	/	/	/
〃	〃	/	/	/	/	/	/	/
Marqurite Yellow	Massicot Yellow	###	–	–	###	+	–	##
Cream Buff.	Cream Buff.	###	–	–	###	+	–	##
Cream Color	Cream Color	+	–	–	+	–	–	+
Massicot Yellow	Massicot Yellow	+	–	–	+	–	–	+
Uncolor	Uncolor	/	/	/	/	/	/	/
〃	〃	/	/	/	/	/	/	/
Amer Yellow	Amber Yellow	##	–	–	##	–	–	##
Ferruginous	Ferruginous	##	–	–	##	–	–	##
Colonial Buff.	Colonial Buff	+	–	–	##	–	–	+
Uncolor	Uncolor	/	/	/	/	/	/	/
Naphthalene Yellow	Barium Yellow	+	–	–	##	+	+	+
Deep Chrome	Deep Chrome Bitter Sweet	##	–	–	###	+	+	##
Grenadine	Pink	+	–	–	+	–	–	–
Light Greenish Yellow	Light Greenish Yellow	##	–	–	###	###	###	###

Table S-2. (1) (Continued)

Species and Varieties	Extraction of the pigments of							
	Ethyl Ether.		Ethyl Acetate.			Benzene		
	pH 7	pH 9	pH 2	pH 7	pH 9	pH 2	pH 7	pH 9
P. lilacinum Thom	–	–	+	–	–	–	–	–
〃	–	–	+	–	–	–	–	–
Spicaria violacea Abbott.	–	–	++	+	–	+	+	–
P. janthinellum Biourge.	–	–	+++	–	–	++	–	–
〃	–	–	+	–	–	+	–	–
P. simplicissimum (Oud) Thom.	/	/	/	/	/	/	/	/
〃	/	/	/	/	/	/	/	/
P. ochro-chloron Biourge	–	–	+++	+	–	+++	–	–
〃	–	–	+++	+	–	+++	–	–
P. piscarium Westling.	–	–	+	–	–	+	–	–
〃	–	–	+	–	–	+	–	–
P. miczinskii Zaleski	/	/	/	/	/	/	/	/
〃	/	/	/	/	/	/	/	/
P. nalgiovensis Laxa.	–	–	++	–	–	++	–	–
P. echinulo-nalgiovense Abe.	–	–	++	–	–	++	–	–
〃	–	–	+	–	–	+	–	–
P. canescens Sopp	/	/	/	/	/	/	/	/
P. jenseni Zaleski	–	–	++	–	–	+	–	–
P. nigricans (Bainier) Thom	–	–	++	–	–	++	–	–
P. nigricans Thom *var. sulfuratum* Abe.	–	–	–	–	–	–	–	–
P. melinii Thom	–	–	++	–	–	++	–	–

broth in acidic or neutral & alkalic by various solvents.

Ligroin			Ethanol			Acetone			Glacial A.A.	Pyridine		
pH 2	pH 7	pH 9	Acidic	pH 7	Alkalic	Acidic	pH 7	Alkalic	pH 7	Acidic	pH 7	Alkalic
−	−	−	###	−	−	##	−	−	###	###	−	−
−	−	−	###	−	−	+	−	−	###	###	−	−
###	−	−	###	###	###	###	###	###	###	###	##	##
##	−	−	###	−	−	##	−	−	###	###	−	−
−	−	−	###	−	−	##	−	−	###	###	−	−
/	/	/	/	/	/	/	/	/	/	/	/	/
/	/	/	/	/	/	/	/	/	/	/	/	/
###	+	+	###	−	−	###	−	−	###	###	+	−
###	+	+	###	−	−	###	−	−	###	###	+	−
−	−	−	###	−	−	+	−	−	###	###	−	−
−	−	−	###	−	−	+	−	−	###	###	−	−
/	/	/	/	/	/	/	/	/	/	/	/	/
/	/	/	/	/	/	/	/	/	/	/	/	/
###	−	−	###	−	−	###	−	−	###	###	−	−
###	−	−	###	+	−	###	−	−	###	###	−	−
+	−	−	###	+	−	##	−	−	###	###	−	−
/	/	/	/	/	/	/	/	/	/	/	/	/
−	−	−	###	−	−	+	−	−	###	###	−	−
−	−	−	###	−	−	###	−	−	###	###	−	−
−	−	−	###	−	−	+	−	−	###	##	−	−
+	−	−	###	###	###	##	##	##	###	###	###	##

Table S-2. (2)

Species and Varieties	Strain No.	Color and Color	
		Broth.	pH 2.
P. citrinum Thom.	1131	Light Greenish Yellow.	Pale Greenish Yellow
〃	513	Citron Yellow	Sulphur Yellow
〃	600	Primuline Yellow	Strontin Yellow. PPT-Picric Yellow
P. steckii Zaleski	509	Amber Yellow	Martius Yellow
〃	715	Mustard Yellow	Strontin Yellow
P. citreo-virens Abe	319	Uncolor or Marquerite Yellow	Uncolor or Marquerite Yellow
〃	320	〃	〃
P. corylophilum Dierckx	706	Antimony Yellow	Baryta Yellow
〃	595	〃	〃
P. corylophiloides Abe	984	Amber Yellow	Sulphur Yellow
〃	308	Naphthalene Yellow	Massicot Yellow
P. paxilli Bainier	1286	Cartrige Buff	Cartrige Yellow
P. chrysogenum Thom	1020 914	Light Cadmium	Picric Yellow, PPT-Light Cadmium Yellow
〃	854 506	Primuline Yellow	Wax Yellow
P. chrysognenum Thom *mut. fulvescens* Takashima, Aiima & Abe	515	Light Cadmium	Lemon Yellow, PPT-Yellow Ocher
P. meleagrinum Biourge	1222	Yellow Ocher	Empire Yellow
P. meleagrinum Biourge *var. viridi-flavum* Abe.	652	Primuline Yellow	Straw Yellow
〃	803	Ochraceous Buff	Mustard Yellow
P. notatum Westling	577	Buff Yellow	Maize Yellow
〃	579	Light Greenish Yellow	Pale Greenish Yellow
P. cyaneo-fulvum Biourge	699 573	Lemon Chrome	Pale Lemon Yellow PPT-Aniline Yellow

changes of Broth.		Extraction of the pigments of broth in acidic or neutral & alkalic by various solvents.						
		Chloroform			Buthyl Alcohol			Ethyl Ether.
pH 7.	pH 9.	pH 2	pH 7	pH 9	pH 2	pH 7	pH 9	pH 2
Light Greenish Yellow	Light Greenish Yellow	##	–	–	##	##	##	##
Citron Yellow	Citron Yellow	+	–	–	##	##	##	##
Primuline Yellow	Primuline Yellow	##	+	–	##	+	+	##
Amber Yellow	Amber Yellow	##	–	–	##	+	+	##
Mustrad Yellow	Mustard Yellow	##	+	–	##	+	+	##
Uncolor or Marquerite Yellow	Uncolor	/	/	/	/	/	/	/
〃	Uncolor or Marquerite Yellow	/	/	/	/	/	/	/
Antimony Yellow	Antimony Yellow	–	–	–	##	–	–	–
〃	〃	–	–	–	##	–	–	–
Amber Yellow	Amber Yellow	–	–	–	##	+	–	–
Massicot Yellow	Barium Yellow	–	–	–	##	+	–	–
Cartrige Yellow	Pale Pinkish Buff.	/	/	/	/	/	/	/
Light Cadmium Yellow	Light Cadmium Yellow	–	–	–	##	–	–	##
Primuline Yellow	Primuline Yellow	##	##	–	##	##	##	##
Light Cadmium	Light Cadmium	–	–	–	##	–	–	+
Yellow Ocher	Yellow Ocher	##	##	–	##	##	##	##
Primuline Yellow	Primuline Yellow	##	##	–	##	##	##	##
Ochraceous Buff	Ochraceous Buff	##	##	–	##	##	##	##
Buff Yellow	Buff Yellow	##	+	–	##	##	##	##
Light Greenish Yellow	Light Greenish Yellow	+	–	–	##	+	+	+
Lemon Yellow	Lemon Chrome	##	+	–	##	##	##	##

Table S-2. (2) (Continued)

Species and Varieties.	Extraction of the pigments of								
	Ethyl Ether		Ethyl Acetate			Benzene		
	pH 7	pH 9	pH 2	pH 7	pH 9	pH 2	pH 7	pH 9
P. citrinum Thom.	+	−	###	+	−	###	+	−
〃	−	−	###	−	−	###	−	−
〃	−	−	###	−	−	###	−	−
P. steckii Zaleski	−	−	###	−	−	###	−	−
〃	−	−	###	−	−	###	−	−
P. citreo-virens Abe	/	/	/	/	/	/	/	/
〃	/	/	/	/	/	/	/	/
P. corylophilum Dierckx	−	−	−	−	−	−	−	−
〃	−	−	−	−	−	−	−	−
P. corylophiloides Abe	−	−	+	−	−	−	−	−
〃	−	−	−	−	−	−	−	−
P. paxilli Bainier	/	/	/	/	/	/	/	/
P. chrysogenum Thom	−	−	###	−	−	−	−	−
〃	##	##	###	+	+	###	+	−
P. chrysogenum Thom *mut. fulvescens* Takashima, Arima & Abe	−	−	+	−	−	−	−	−
P. meleagrinum Biourge	+	−	###	+	+	###	+	−
P. meleagrinum Biourge *var. viridi-flavum* Abe.	+	+	###	−	−	###	+	−
〃	+	+	###	+	+	###	+	−
P. notatum Westling	+	−	###	+	+	###	+	−
〃	−	−	−	−	−	−	−	−
P. cyaneo-fulvum Biourge	+	+	###	+	−	###	−	−

broth in acidic or neutral & alkalic by various solvents.

Ligroin			Ethanol			Acetone			Glacial A.A.	Pyridine		
pH 2	pH 7	pH 9	Acidic	pH 7	Alkalic	Acidic	pH 9	Alkalic	pH 7	Acidic	pH 7	Alkalic
++	−	−	++	++	++	++	++	++	++	++	++	++
++	+	−	++	++	++	++	++	++	++	++	++	++
++	−	−	++	++	++	++	−	−	++	++	−	−
++	−	−	++	−	−	++	−	−	++	++	−	−
++	−	−	++	−	−	++	−	−	++	++	−	−
/	/	/	/	/	/	/	/	/	/	/	/	/
/	/	/	/	/	/	/	/	/	/	/	/	/
−	−	−	++	−	−	+	−	−	++	++	−	−
−	−	−	++	−	−	+	−	−	++	++	−	−
−	−	−	++	−	−	+	−	−	++	++	−	−
−	−	−	++	−	−	++	−	−	++	++	−	−
/	/	/	/	/	/	/	/	/	/	/	/	/
−	−	−	++	++	++	++	++	++	++	++	++	++
++	−	−	++	++	++	++	++	++	++	++	++	++
−	−	−	++	++	++	++	++	++	++	++	++	++
++	−	−	++	++	++	++	++	++	++	++	++	++
++	−	−	++	−	−	++	−	−	++	++	−	−
+	−	−	++	−	−	++	−	−	++	++	−	−
+	−	−	++	−	−	++	−	−	++	++	−	−
+	−	−	++	++	++	++	++	++	++	++	++	++
+	−	−	++	++	++	++	++	++	++	++	++	++

Table S-2. (3)

Species and Varieties	Strain No.	Color and Color	
		Broth.	pH 2.
P. oxalicum Currie & Thom	258	Ivory Yellow	Ivory Yellow
〃	834	〃	Pale Cinnamon Pink
P. atramentosum Thom	1284	Light Buff	Light Buff
P. digitatum Saccardo	1331	Uncolor	Uncolor
P. digitatum Saccardo var. *latum* Abe	605	Amber Yellow	Barium Yellow
P. roqueforti Thom	733	Light Buff	Massicot Yellow
〃	1253	Naples Yellow	Straw Yellow
P. roqueforti Thom *var. punctatum* Abe	315	Straw Yellow	Naples Yellow
〃	314	〃	Cream Color
P. casei Staub	817	Antimony Yellow	Warm Buff. PPT Buckthorn Brown
〃	1030	〃	〃
P. casei Staub *var. compactum* Abe	1276	Cream Color	Straw Yellow
P. pseudo-casei Abe	317	Warm Buff	Naples Yellow
〃	1166	Cream Buff	Massicot Yellow
P. brevi-compactum Dierckx	1285	Pale Green Yellow	Sulphur Yellow
P. stoloniferum Thom	815	Pale Greenish Yellow	Martius Yellow
〃	709	Citron Yellow	〃
P. brunneo-stoloniferum Abe	1132	Mustard Yellow	Naples Yellow

change of Broth.		Extraction of the pigments of broth in acidic or neutral & alkalic by various solvents.						
		Chloroform.			Buthyl Alcohol			Ethyl Ether.
pH 7.	pH 9.	pH 2	pH 7	pH 9	pH 2	pH 7	pH 9	pH 2
Ivory Yellow	Cream Color	–	–	–	++	–	–	–
Pale Pinkish Buff	Pale Pinkish Buff	–	–	–	+++	–	–	–
Light Buff	Salmon Buff	–	–	–	+++	+	–	+
Uncolor	Uncolor	/	/	/	/	/	/	/
Mustard Yellow	Buff Yellow	+	–	–	+++	–	–	++
Light Buff	Light Buff	–	–	–	++	–	–	+
Straw Yellow	Cream Color	–	–	–	+++	–	–	+
〃	Straw Yellow	++	–	–	+++	+	+	++
〃	〃	++	–	–	+++	+	+	+
Antimony Yellow	Antimony Yellow	+	–	–	++	–	–	+
〃	〃	+	–	–	+++	–	–	+
Cream Color	Cream Color	–	–	–	++	–	–	+
Warm Buff	Warm Buff	+	–	–	+	–	–	+
Cream Color	Cream Color	+	–	–	+	–	–	+
Pale Green Yellow	Pale Green Yellow	+	–	–	+++	+++	+++	–
Martius Yellow	Pale Greenish Yellow	+	–	–	+++	+++	+++	–
Barium Yellow	Citron Yellow	+	–	–	+++	+++	+++	–
Chamois	Chamois	+	–	–	+++	++	++	+

Table S-2. (3) (Continued)

Species and Varieties.	Extraction of the pigments of							
	Ethyl Ether.		Ethyl Acetate.			Benzene		
	pH 7	pH 9	pH 2	pH 7	pH 9	pH 2	pH 7	pH 9
P. oxalicum Currie & Thom	−	−	++	−	−	−	−	−
〃	−	−	+	−	−	−	−	−
P. atramentosum Thom	−	−	+	−	−	−	−	−
P. digitatum Saccardo	/	/	/	/	/	/	/	/
P. digitatum Saccardo *var. latum* Abe	−	−	++	−	−	−	−	−
P. roqueforti Thom	−	−	+	−	−	+	−	−
〃	−	−	+	−	−	+	−	−
P. roqueforti Thom *var. punctatum* Abe.	−	−	++	−	−	+	−	−
〃	−	−	++	−	−	++	−	−
P. casei Staub	−	−	++	−	−	−	−	−
〃	−	−	++	−	−	−	−	−
P. casei Staub *var. compactum* Abe	−	−	+	−	−	−	−	−
P. pseudo-casei Abe	+	−	−	−	−	−	−	−
〃	+	−	−	−	−	−	−	−
P. brevi-compactum Dierckx	−	−	+	+	−	−	−	−
P. stoloniferum Thom	−	−	+	+	−	−	−	−
〃	−	−	+	+	+	−	−	−
P. brunneo-stoloniferum Abe	+	+	+	+	+	−	−	−

broth in acidic or neutral & alkalic by various solvents.

Ligroin			Ethanol			Acetone			Glacial A.A.	Pyridine		
pH 2	pH 7	pH 9	Acidic	pH 7	Alkal-ic	Acidic	pH 7	Alkal-ic	pH 7	Acidic	pH 7	Alkal-ic
−	−	−	++	+	−	++	−	−	++	++	+	+
−	−	−	+	−	−	++	−	−	++	++	+	+
−	−	−	+	−	−	+	−	−	++	++	−	−
/	/	/	/	/	/	/	/	/	/	/	/	/
−	−	−	++	−	−	++	−	−	++	++	++	−
−	−	−	++	−	−	++	−	−	++	++	−	−
−	−	−	++	−	−	++	−	−	++	++	−	−
−	−	−	++	+	+	++	−	−	++	++	−	−
−	−	−	++	+	+	++	−	−	++	++	−	−
−	−	−	++	+	+	++	−	−	++	++	−	−
−	−	−	++	−	−	++	−	−	++	++	−	−
−	−	−	++	−	−	++	−	−	++	++	−	−
−	−	−	++	−	−	++	−	−	++	++	−	−
−	−	−	++	−	−	++	−	−	++	++	−	−
−	−	−	++	+	+	++	+	+	++	++	+	+
−	−	−	++	++	++	++	+	+	++	++	++	++
−	−	−	++	++	++	++	++	++	++	++	++	++
−	−	−	++	++	++	++	+	+	++	++	++	++

Table S-3. (1) In the strains of Asymmetrica-Fasciculata, color and color changes

Species and Varieties	Strain No.	Color and Color	
		Broth	pH 2.
P. ochraceum Thom	766	Capucine Yellow	Deep Chrome
P. crustosum Thom	703	Pale Orange Yellow	Mustard Yellow
〃	1058 318	〃	Maize Yellow
P. viridicatum Westling	318	Pinard Yellow	Lemon Yellow
〃	1273	Baryta Yellow	Picric Yellow
P. viridi-cyclopium Abe	843	Cadimum Yellow	Primuline Yellow PPT-Cinnamon
〃	998	Light Orange Yellow	Straw Yellow PPT-Vinaceous Cinnamon
P. olivino-viride Biourge	636	Maize Yellow	Baryta Yellow
〃	373	Naples Yellow	Massicot Yellow
P. palitans Westling	985	Buckthorn Brown	〃
〃	838	Chamois	〃
P. puberulum Bainier	1304	Naples Yellow	〃
〃	1262	Massicot Yellow	Naphthalene Yellow
P. cyclopium Westling	1052	Cream Color	Straw Yellow
〃	840	Empire Yellow	Empire Yellow
P. aurantio-virens Biourge	1226 334	Massicot Yellow	Uncolor or Naphthalene Yellow
〃	887	Antimony Yellow	Massicot Yellow
P. palitans Westling *var. echinoconidium* Abe	848	Naphthalene Yellow	Sea-foam Yellow
〃	1019	Cream Color	Naphthalene Yellow
P. cyclopium Westling *var. echinulatum* Raper & Fennell	987	Naples Yellow	Straw Yellow

of broth and the extractions broth pigments by various solvents at pH 2, 7 and 9.

changes of Broth.		Extraction of the pigments of broth in acidic or neutral & alkalic by various solvents.						
		Chloroform.			Buthyl Alcohol			Ethyl Ether.
pH 7.	pH 9.	pH 2	pH 7	pH 9	pH 2	pH 7	pH 9	pH 2
Capucine Yellow	Capucine Yellow	+	–	–	++	–	–	+
Pale Yellow Orange	Pale Orange Yellow	+	–	–	++	–	–	++
〃	〃	+	–	–	++	–	–	++
Lemon Yellow	Empire Yellow	+	–	–	+++	+	+	++
Baryta Yellow	Baryta Yellow	+	–	–	++	–	–	+
Cadmium Yellow	Capucine Yellow	+	–	–	+++	+	–	+
Light Orange Yellow	Deep Chrome	+	–	–	+++	–	–	+
Maize Yellow	Pale Orange Yellow	+	–	–	+++	+	+	++
Naples Yellow	Naples Yellow	++	–	–	+++	–	–	++
Buckthorn Brown	Buckthorn Brown	+	–	–	+++	–	–	+++
Antimony Yellow	Chamois	+	–	–	+++	–	–	+++
Naples Yellow	Warm Buff	+	–	–	+++	–	–	++
Naphthalene Yellow	Massicot Yellow	+	–	–	+	–	–	+
Cream Color	Cream Color	+	–	–	++	–	–	++
Pinard Yellow	Empire Yellow	+	+	+	+++	+	+	+
Uncolor or Naphthalene Yellow	Massicot Yellow	–	–	–	+++	–	–	–
Antimony Yellow	〃	–	–	–	+++	–	–	–
Sea-foam Yellow	Naphthalene Yellow	+	–	–	+++	+	–	+
Massicot Yellow	Cream Color	+	–	–	+++	–	–	++
Naples Yellow	Antimony Yellow	+	–	–	+++	+	–	++

Table S-3. (1) (Continued)

Species and Varieties.	Extraction of the pigments of							
	Ethyl Ether.		Ethyl Acetate.			Benzene		
	pH 7	pH 9	pH 2	pH 7	pH 9	pH 2	pH 7	pH 9
P. ochraceum Thom	−	−	+	−	−	−	−	−
P. crustosum Thom	−	−	++	−	−	++	−	−
〃	−	−	++	−	−	+	−	−
P. viridicatum Westling	+	−	++	+	+	−	−	−
〃	−	−	++	+	+	−	−	−
P. viridi-cyclopium Abe	−	−	++	+	−	+	−	−
〃	−	−	++	−	−	+	−	−
P. olivino-viride Biourge	−	−	+++	−	−	+	−	−
〃	−	−	+++	−	−	++	−	−
P. palitans Westling	−	−	+++	−	−	++	−	−
〃	−	−	+++	−	−	++	−	−
P. puberulum Bainier	−	−	+++	−	−	+	−	−
〃	−	−	+	−	−	+	−	−
P. cyclopium Westling	−	−	+	+	+	+	−	−
〃	+	−	++	+	+	+	+	−
P. aurantio-virens Biourge	−	−	+	−	−	−	−	−
〃	−	−	+	−	−	−	−	−
P. palitans Westling *var. echinoconidium* Abe	−	−	+	−	−	+	−	−
〃	−	−	+++	−	−	+	−	−
P. cyclopium Westling *var. echinulatum* Raper & Fennell	−	−	++	+	−	+	−	−

broth in acidic or neutral & alkalic by various solvents.

Ligroin			Ethanol			Acetone			Glacial A.A.	Pyridine		
pH 2	pH 7	pH 9	Acidic	pH 7	Alkal-ic	Acidic	pH 7	Alkal-ic	pH 7	Acidic	pH 7	Alkal-ic
–	–	–	##	–	–	#	–	–	##	##	–	–
–	–	–	+	–	–	+	–	–	##	##	–	–
–	–	–	##	–	–	#	–	–	##	##	–	–
–	–	–	#	#	#	##	#	+	##	##	+	+
–	–	–	##	–	–	##	–	–	##	##	–	–
–	–	–	##	+	+	##	+	+	##	#	+	+
–	–	–	##	+	+	##	+	+	##	##	+	+
–	–	–	##	+	–	#	–	–	##	##	+	–
–	–	–	##	+	+	##	–	–	##	##	–	–
–	–	–	##	–	–	##	–	–	##	##	–	–
–	–	–	##	–	–	##	–	–	##	##	–	–
–	–	–	##	+	–	#	–	–	##	##	+	+
–	–	–	#	–	–	+	–	–	##	#	–	–
–	–	–	#	–	–	#	–	–	##	#	+	+
–	–	–	##	#	+	##	#	+	##	##	+	+
–	–	–	##	–	–	#	–	–	##	##	–	–
–	–	–	##	–	–	##	–	–	##	##	–	–
–	–	–	#	–	–	#	–	–	##	#	+	+
–	–	–	#	–	–	#	–	–	##	#	+	+
–	–	–	#	+	+	#	–	–	##	##	+	+

Table S-3. (2).

Species and Varieties	Strain No.	Color and Color	
		Broth.	pH 2.
P. urticae Bainier	1314	Xanthine Orange	Light Orange Yellow PPT-Mars Yellow
〃	1315	〃	〃
P. expansum (Link) Thom	736	Yellow Ocher	Baryta Yellow PPT-Clay Color
〃	740	Capucine Yellow	Empire Yellow PPT-Cadmium Yellow
P. martensii Biourge	305	Light Orange Yellow	Empire Yellow
〃	1201	Capucine Orange	Pinard Yellow PPT-Sanford Brown
P. italicum Wehmer	774	Maize Yellow	Baryta Yellow
P. corymbiferm Westling	606	Ochraceous Buff	Maize Yellow
P. granulatum Bainier	852	Raw Sienna	Yellow Ocher
P. claviforme Bainier	554	Yellow Ocher	Buff Yellow
〃	739	Straw Yellow	Straw Yellow
P. claviforme Bainier *mut. candicans* Abe *and* Ura	1277	Deep Chrome	Baryta Yellow PPT-Xanthine Orange
P. claviforme Bainier *mut. olivicolor* Abe *and* Ura	1278	〃	〃
P. clavigerum Demelius	1161	Cadmium Yellow	Pinard Yellow PPT-Raw Sienna

change of Broth.		Extraction of the pigments of broth in acidic or neutral & alkalic by various solvents.						
		Chloroform.			Buthyl Alcohol			Ethyl Ether.
pH 7.	pH 9.	pH 2	pH 7	pH 9	pH 2	pH 7	pH 9	pH 2
Xanthine Orange	Xanthine Orange	–	–	–	++	–	–	–
〃	〃	–	–	–	++	–	–	–
Yellow Ocher	Yellow Ocher	++	–	–	+++	+	–	+++
Orange Buff	Cadmium	+++	–	–	+++	+	–	+++
Light Orange Yellow	Deep Chrome	+	+	–	+++	+	+	++
Mikado Orange	Salmon Orange	+	–	–	+++	+	+	++
Maize Yellow	Maize Yellow	+	–	–	+++	–	–	+++
Pale Yellow Orange	Ochraceous Buff	–	–	–	++	–	–	+
Raw Sienna	Raw Sienna	–	–	–	++	–	–	+
Yellow Ocher	Clay Color	++	–	–	+++	–	–	+
Straw Yellow	Amber Yellow	+	–	–	+++	–	–	++
Deep Chrome	Mars Yellow	+	–	–	+++	–	–	+
〃	〃	+	–	–	+++	–	–	+
Lemon Chrome	Cadmium Yellow	+	–	–	+++	+	–	–

Table S-3. (2) (Continued)

Species and Varieties.	Extraction of the pigments of							
	Ethyl Ether.		Ethyl Acetate.			Benzene		
	pH 7	pH 9	pH 2	pH 7	pH 9	pH 2	pH 7	pH 9
P. urticae Bainier	–	–	+	–	–	–	–	–
〃	–	–	+	–	–	–	–	–
P. expansum (Link) Thom	–	–	++	–	–	++	–	–
〃	–	–	+++	–	–	+++	–	–
P. martensii Biourge	–	–	++	+	–	++	–	–
〃	–	–	++	–	–	+	–	–
P. italicum Wehmer	–	–	++	–	–	+	–	–
P. corymbiferm Westling	–	–	+	–	–	–	–	–
P. granulatum Bainier	–	–	+	–	–	–	–	–
P. claviforme Bainier	–	–	+	–	–	–	–	–
〃	–	–	++	–	–	–	–	–
P. claviforme Bainier *mut. candicans* Abe and Ura	–	–	++	–	–	–	–	–
P. claviforme Bainier *mut. olivicolor* Abe and Ura	–	–	++	–	–	–	–	–
P. clavigerum Demelius	–	–	++	–	–	+	–	–

broth in acidic or neutral & alkalic by various solvents.

Ligroin			Ethanol			Acetone			Glacial A.A.	Pyridine		
pH 2	pH 7	pH 9	Acidic	pH 7	Alkalic	Acidic	pH 7	Alkalic	pH 7	Acidic	pH 7	Alkalic
−	−	−	##	−	−	##	−	−	###	##	−	−
−	−	−	##	−	−	##	−	−	###	##	−	−
−	−	−	###	+	+	###	+	−	###	##	−	−
−	−	−	###	+	+	###	+	−	###	##	−	−
−	−	−	##	+	+	##	+	+	##	##	+	+
−	−	−	##	##	##	##	+	+	##	##	##	##
−	−	−	##	−	−	##	−	−	###	##	+	−
−	−	−	##	−	−	##	−	−	###	##	−	−
−	−	−	##	−	−	##	−	−	###	##	−	−
−	−	−	##	−	−	##	−	−	###	##	+	−
−	−	−	##	−	−	##	−	−	###	##	+	−
−	−	−	##	−	−	##	−	−	###	##	−	−
−	−	−	##	−	−	##	−	−	###	##	+	−
−	−	−	##	+	−	##	−	−	###	##	+	−

Table S-4. (1). In the strains of Biverticillata-Symmetrica, color and color changes

Species and Varieties	Strain No.	Color and Color Broth.	pH. 2.
P. wortmanni Klöcker	364	Uncolor	Uncolor
P. duclauxi Delacroix	1293	Deep Chrome	Primulin Yellow PPT-Old Gold
P. fnniculosum Thom	71	Orange Buff	Light Orange Yellow PPT-Xanthine Orange
〃	1267	Xanthine Orange	Light Orange Yellow PPT-Argus Brown
P. islandicum Sopp	946	Orange Buff	Capucine Yellow
〃	1270	Deep Chrome	〃
P. verruculosum Peyronel	1114 665	Naphthalene Yellow	Naphthalene Yellow
〃	961	Sulphur Yellow	Baryta Yellow PPT-Raw Sienna
P. varians Smith	1209	Pale Orange Yellow	Maize Yellow PPT-Light Salmon Orange
〃	379	Naphthalene Yellow	Naphthalene Yellow
P. purpurogenum Stoll	1143	Orange Rufous	Massicot Yellow PPT-Buret Sienna
〃	76	Scarlet	Salmon Orange PPT-Morocco Red
P. purpurogenum Stoll *var. rubri-sclerotium* Thom	1210	Pale Ochraceous Salmon	Light Buff
〃	325	Salmon Color	Seashell Pink
〃 (*Non-sclerotigenic type*)	1148	Grenadine Red	Bittersweet Orange
〃	562	Salmon Orange	Light Salmon Orange
P. rubrum Stoll	1154	Strawberry Pink	Grenadine Pink
〃	1145	Old Gold	Baryta Yellow PPT-Raw Sienna
P. aculeatum Raper *and* Thom	810	Uncolor	Uncolor
P. aculeatum Raper *and* Thom *var. apiculatum* Abe	1189 1152	Massicot Yellow	Sea-foam Yellow
P. variable Sopp	942 1175	Mustard Yellow	Straw Yellow PPT-Sudan Brown

of broth and the extractions broth pigments by various solvents at pH's 2, 7 and 9.

changes of Broth.		Extraction of the pigments of broth in acidic or neutral & alkalic by various solvents.						
		Chloroform.			Buthyl Alcohol			Ethyl Ether.
pH 7.	pH 9.	pH 2	pH 7	pH 9	pH 2	pH 7	pH 9	pH 2
Uncolor	Uncolor	/	/	/	/	/	/	/
Deep Chrome	Scarlet	+	–	–	###	##	–	##
Orange Buff	Orange Buff	+	–	–	##	+	–	##
Mars Yellow	Mars Yellow	+	–	–	##	+	–	##
Orange Buff	Light Orange Yellow	##	##	##	###	+	–	###
Cadmium Yellow	Orange Yellow	##	##	##	###	##	##	###
Massicot Yellow	Naphthalene Yellow	/	/	/	/	/	/	/
Sulphine Yellow	Orange Buff	–	–	–	###	##	–	##
Pale Orange Buff	Pale Orange Buff	–	–	–	###	+	–	###
Naphthalene Yellow	Naphthalene Yellow	/	/	/	/	/	/	/
Orange Rufous	Orange Rufous PPT-English Red	+	–	–	###	##	+	###
Scarlet	Scarlet PPT-Brazil Red	##	–	–	###	##	+	###
Pale Ochraceous Salmon	Pale Ochraceous Salmon	+	–	–	###	+	–	##
Salmon Color	Salmon Color	+	–	–	###	+	–	##
Scarlet	Brazil Red PPT-Salmon Orange	+	–	–	###	##	##	###
Orange Rufous	Orange Rufous	+	–	–	###	+	+	###
Grenadine	Bitersweet Pink	+	–	–	###	+	+	###
Old Gold	Raw Sienna	+	–	–	###	+	+	###
Uncolor	Uncolor	/	/	/	/	/	/	/
Massicot Yellow	Cream Color	–	–	–	###	–	–	###
Mustard Yellow	Primuline Yellow	##	–	–	###	–	–	###

S-4. (1). (Continued)

Species and Varieties.	Extraction of the pigments of							
	Ethyl Ether.		Ethyl Acetate			Benzene		
	pH 7	pH 9	pH 2	pH 7	pH 9	pH 2	pH 7	pH 9
P. wortmanni Klöcker	/	/	/	/	/	/	/	/
P. duclauxi Delacroix	−	−	###	##	−	−	−	−
P. funiculosum Thom	−	−	##	−	−	−	−	−
〃	−	−	##	−	−	−	−	−
P. islandicum Sopp	##	−	###	##	+	##	##	+
〃	##	−	###	##	##	##	##	+
P. verruculosum Peyronel	/	/	/	/	/	/	/	/
〃	+	−	###	−	−	−	−	−
P. varians Smith	−	−	###	−	−	−	−	−
〃	/	/	/	/	/	/	/	/
P. purpurogenum Stoll	+	−	###	+	−	−	−	−
〃	##	−	###	+	−	##	−	−
P. purpurogenum Stoll *var. rubri-sclerotium* Thom	−	−	##	−	−	−	−	−
〃	−	−	##	−	−	−	−	−
〃 (*Non-sclerotigenic type*)	−	−	##	−	−	−	−	−
〃	−	−	##	−	−	−	−	−
P. rubrum Stoll	−	−	##	−	−	−	−	−
〃	−	−	###	−	−	−	−	−
P. aculeatum Raper *and* Thom	/	/	/	/	/	/	/	/
P. aculeatum Raper *and* Thom *var. apiculatum* Abe	−	−	##	−	−	−	−	−
P. variable Sopp	−	−	###	−	−	+	−	−

broth in acidic or neutral & alkalic by various solvents.

Ligroin			Ethanol			Acetone			Glacial A.A.	Pyridine		
pH 2	pH 7	pH 9	Acidic	pH 7	Alkalic	Acidic	pH 7	Alkalic	pH 7	Acidic	pH 7	Alkalic
/	/	/	/	/	/	/	/	/	/	/	/	/
−	−	−	##	−	−	##	−	−	##	##	+	−
−	−	−	##	−	−	##	−	−	##	##	−	−
−	−	−	##	−	−	##	−	−	##	##	−	−
##	−	−	##	+	−	##	+	−	##	##	+	−
##	+	−	##	+	−	##	##	−	##	##	+	−
/	/	/	/	/	/	/	/	/	/	/	/	/
−	−	−	##	+	−	##	+	−	##	##	+	−
−	−	−	##	+	−	+	−	−	##	##	+	−
/	/	/	/	/	/	/	/	/	/	/	/	/
−	−	−	##	−	−	##	−	−	##	##	+	+
−	−	−	##	−	−	##	−	−	##	##	−	−
−	−	−	##	−	−	+	−	−	##	##	−	−
−	−	−	+	−	−	+	−	−	##	##	−	−
−	−	−	##	−	−	+	−	−	##	##	+	−
−	−	−	##	−	−	+	−	−	##	##	+	−
−	−	−	##	−	−	+	−	−	##	##	+	−
−	−	−	##	−	−	+	−	−	##	##	##	−
/	/	/	/	/	/	/	/	/	/	/	/	/
−	−	−	##	−	−	+	−	−	##	##	−	−
−	−	−	##	−	−	+	−	−	##	##	+	+

Table S-4. (2).

Species and Varieties	Strain No.	Color and Color	
		Broth.	pH 2.
P. rugulosum Thom	322 375	Ochraceous Buff	Pinard Yellow PPT-Raw Sienna
P. concavo-rugulosum Abe	672	Amber Yellow	Citron Yellow
〃	744	Barium Yellow	Naphthalene Yellow
P. tardum Thom	1183 939	Naphthalene Yellow	〃
P. diversum Raper *and* Fennell	1294	Uncolor	Uncolor
P. diversum var. aureum Raper *and* Fennell	1295	Naphthalene Yellow	Naphthalene Yellow
P. herquei Bainier *and* Sartory	958 954	Orange Citrine	Aniline Yellow PPT-Medal Bronze
〃	1313	Lemon Yellow	Martius Yellow PPT-Light Cadmium Yellow
P. paraherquei Abe	964	Marquerite Yellow	Marquerite Yellow
〃	824	Maize Yellow	Straw Yellow PPT-Naples Yellow
P. novae-zeelandiae van Beyma	1296	Massicot Yellow	Naphthalene Yellow
P. estinogenum Komatu *and* Abe	1196 1195	Yellow Ocher	Pinard Yellow PPT-Raw Sienna
Polyverticillata			
P. albicans Bainnier	1316	Uncolor	Uncolor

changes of Broth.		Extraction of the pigments of broth in acidic or neutral & alkalic by various solvents.						
		Chloroform.			Buthyl Alcohol			Ethyl Ether
pH 7.	pH 9.	pH 2	pH 7	pH 9	pH 2	pH 7	pH 9	pH 2
Pale Orange Yellow	Apricot Buff	###	–	–	###	+	+	###
Amber Yellow	Antimony Yellow	+	–	–	###	###	+	###
Barium Yellow	Citron Yellow	+	–	–	###	###	##	###
Naphthalene Yellow	Naphthalene Yellow	+	–	–	+	–	–	+
Uncolor	Uncolor	/	/	/	/	/	/	/
Naphthalene Yellow	Naples Yellow	–	–	–	###	–	–	###
Orange Citrine	Orange Citrine	###	–	–	###	+	+	###
Lemon Chrome	Light Cadmium	###	+	+	###	###	##	###
Marquerite Yellow	Cartridge Yellow	+	–	–	###	–	–	##
Maize Yellow	Baryta Yellow	+	–	–	###	–	–	##
Massicot Yellow	Naples Yellow	–	–	–	###	–	–	###
Yellow Ocher	Yellow Ocher	###	–	–	###	##	–	###
Uncolor	Uncolor	/	/	/	/	/	/	/

Table S-4. (2). (Continued)

Species and Varieties.	Extraction of the pigments of							
	Ethyl Ether.		Ethyl Acetate.			Benzene		
	pH 7	pH 9	pH 2	pH 7	pH 9	pH 2	pH 7	pH 9
P. rugulosum Thom	–	–	###	–	–	###	–	–
P. concavo-rugulosum Abe	###	–	###	###	–	–	–	–
〃	##	-	##	–	–	–	–	–
P. tardum Thom	–	–	+	–	–	–	–	–
P. diversum Raper *and* Fennell	/	/	/	/	/	/	/	/
P. diversum var. aureum Raper *and* Fennell	–	–	###	–	–	–	–	–
P. herquei Bainier *and* Sartory	–	–	###	–	–	###	–	–
〃	+	–	###	+	–	###	–	–
P. paraherquei Abe	–	–	##	–	–	–	–	–
〃	–	–	##	–	–	–	–	–
P. novae-zeelandiae van Beyma	–	–	##	–	–	–	–	–
P. estinogenum Komatu *and* Abe	–	–	###	–	–	###	–	–
Polyverticillata								
P. albicans Bainnier	/	/	/	/	/	/	/	/

broth in acidic or neutral & alkalic by various solvents.

Ligroin			Ethanol			Acetone			Glacial A.A.	Pyridine		
pH 2	pH 7	pH 9	Acidic	pH 7	Alkalic	Acidic	pH 7	Alkalic	pH 7	Acidic	pH 7	Alkalic
++	−	−	++	−	−	++	−	−	++	++	−	−
−	−	−	++	+	−	++	+	−	++	++	−	−
−	−	−	++	−	−	++	−	−	++	++	+	−
−	−	−	++	−	−	+	−	−	++	+	−	−
/	/	/	/	/	/	/	/	/	/	/	/	/
−	−	−	+	−	−	−	−	−	++	+	−	−
+	−	−	++	+	+	++	+	−	++	++	+	+
+	−	−	++	+	+	+	−	−	++	++	+	−
−	−	−	++	+	−	++	−	−	++	++	+	−
−	−	−	++	+	−	++	−	−	++	++	+	−
−	−	−	++	+	−	++	−	−	++	++	−	−
−	−	−	++	+	−	++	+	−	++	++	+	−
/	/	/	/	/	/	/	/	/	/	/	/	/

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Plate I

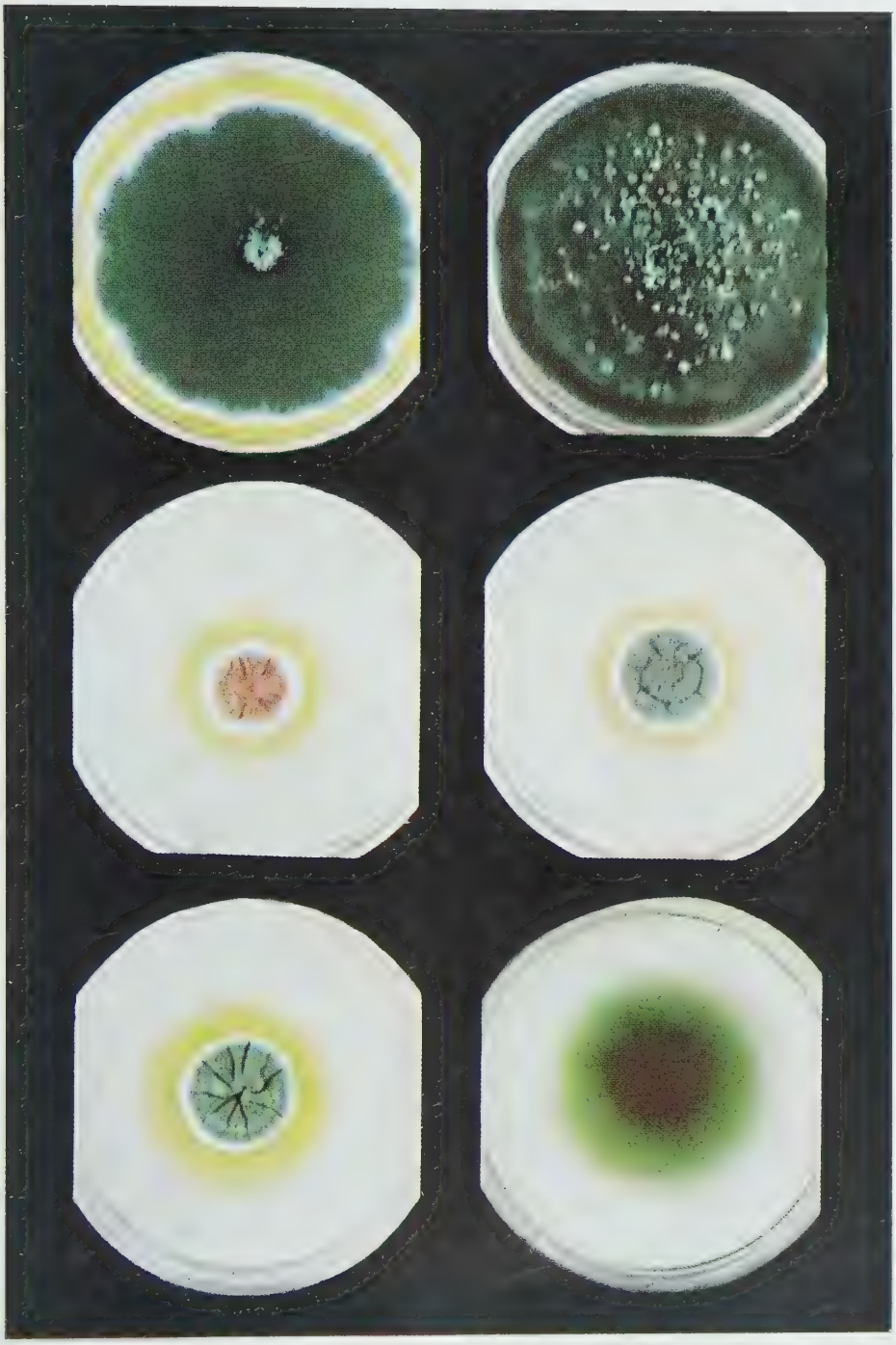

Fig. C 1A (upper left), *Penicillium thomii* Maire var. *flavescens* Abe, FAT 340, on Czapek agar, 10 days.

Fig. C 1B (upper right), *Penicillium thomii* Maire var. *flavescens* Abe, FAT 340, on Czapek agar, 20 days.

Fig. C 2 (center left), *Penicillium cinnamopurpureum* Abe, FAT 362, on Czapek agar, 10 days.

Fig. C 3 (center right), *Penicillium lilacino-echinulatum* Abe, FAT 84, on Czapek agar, 10 days.

Fig. C-4 (lower left), *Penicillium citreo-viride* Biourge var. *aeneum* Abe, FAT 124, on Czapek agar, 10 days.

Fig. C 5 (lower right), *Penicillium trzebinskii* Zaleski var. *magnum* Sakaguchi and Abe, FAT 24, on Czapek agar, 10 days.

Plate II

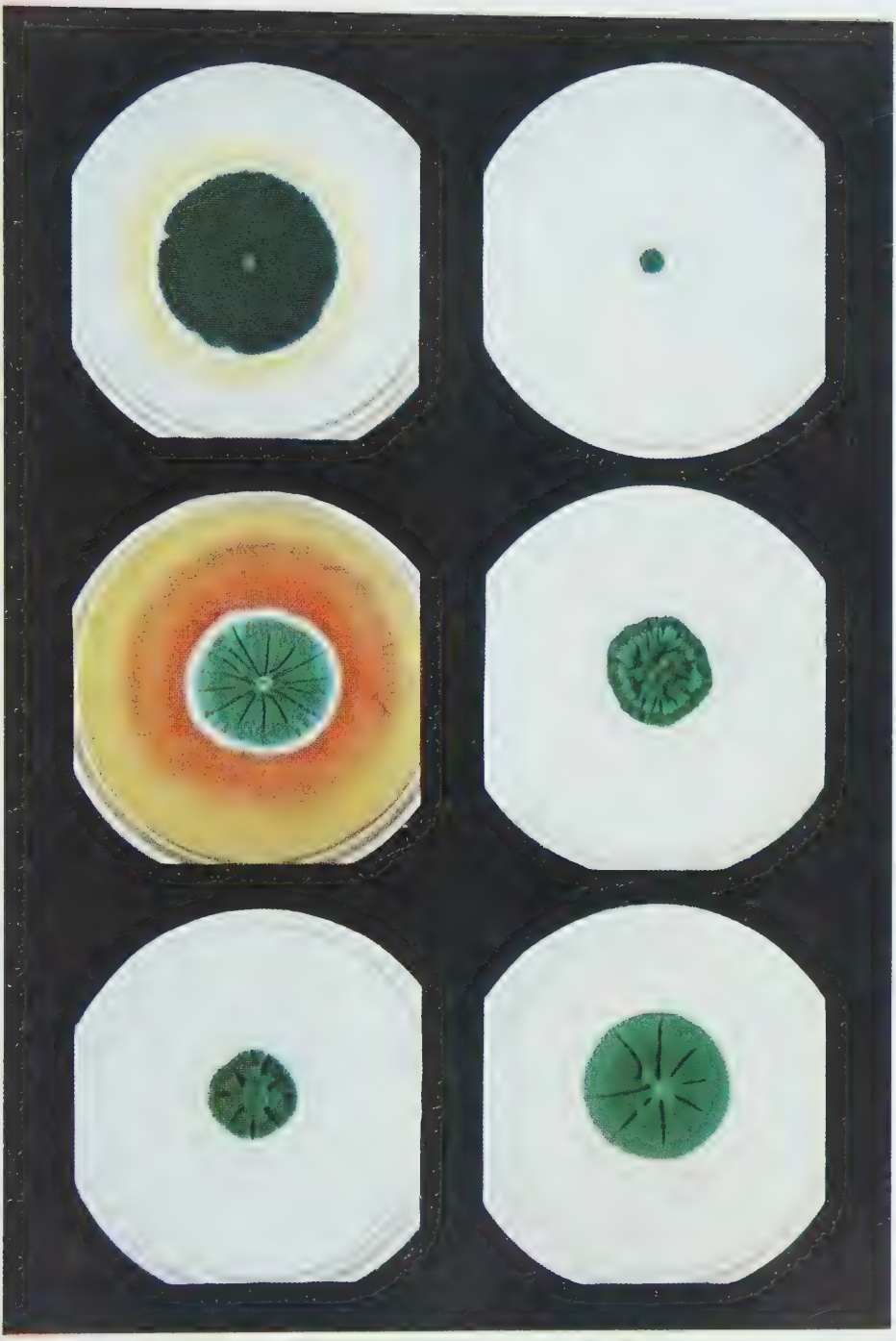

Fig. C-6 (upper left), *Penicillium trzebinskianum* Abe, FAT 1138, on Czapek agar, 10 days.
Fig. C-7 (upper right), *Penicillium fusco-flavum* Abe, FAT 1081, on Czapek agar, 10 days.
Fig. C-8 (center left), *Penicillium adametzioides* Abe, FAT 1302, on Czapek agar, 10 days.
Fig. C-9 (center right), *Penicillium decumbens Thom* var. *atro-virens* Abe, 1140, on Czapek agar, 10 days.
Fig. C-10 (lower left), *Penicillium fellutanum* Biourge var. *nigro-castaneum* Abe, FAT 623, on Czapek agar, 10 days.
Fig. C-11 (lower right), *Penicillium charlesii* Smith var. *rapidum* Abe, FAT 734, on Czapek agar, 10 days.

PLATE III

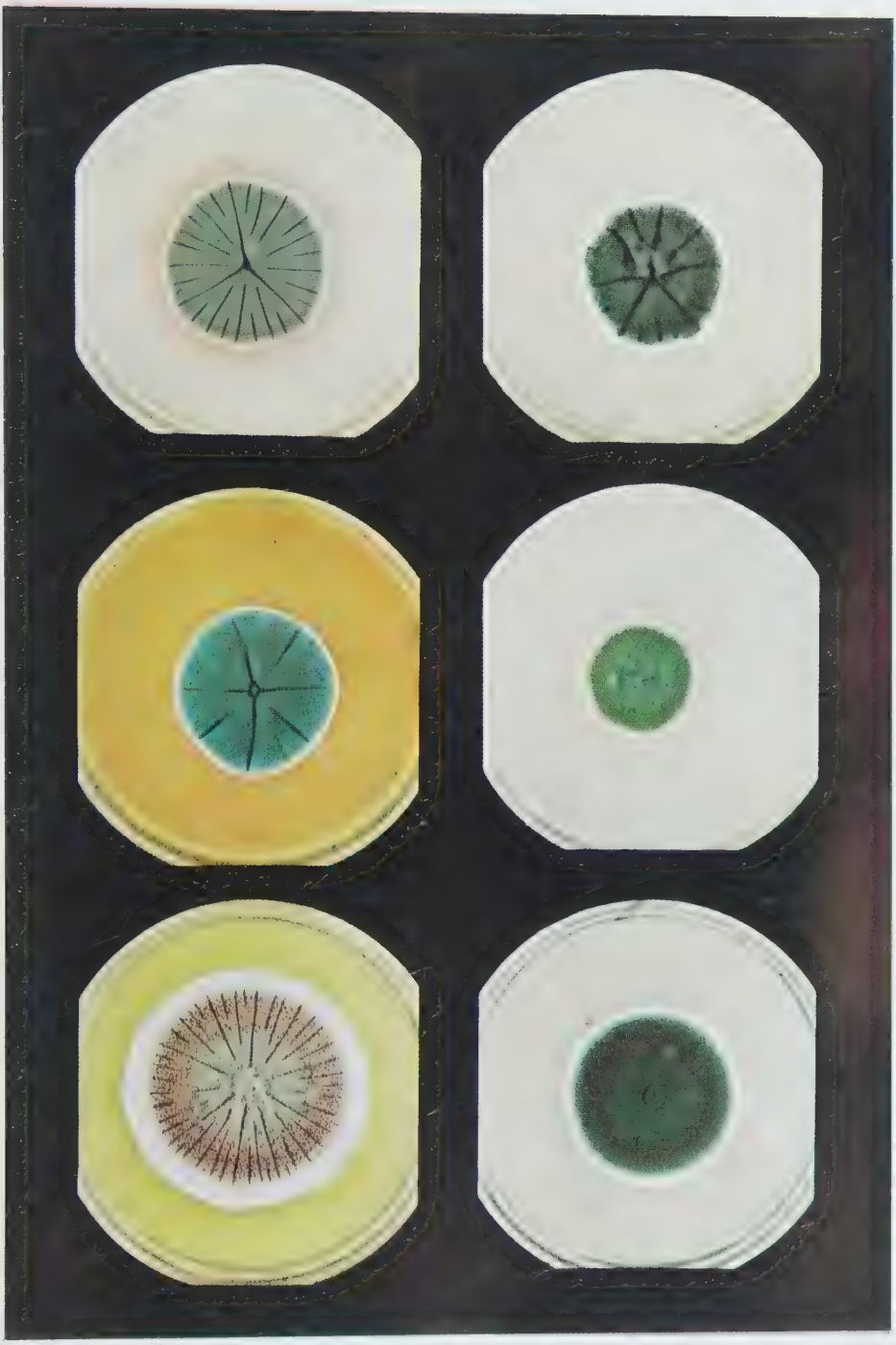

Fig. C-12 (upper left), *Penicillium echinulo-nalgiovense* Abe, FAT 907, on Czapek agar, 10 days.
Fig. C-13 (upper right), *Penicillium nigricans* (Bainier) Thom var. *sulfuratum* Abe, FAT 536, on Czapek agar, 10 days.
Fig. C-14 (center left) *Penicillium citreo-virens* Abe, FAT 319, on steep, on steep agar, 10 days.
Fig. C-15 (center right), *Penicillium corylophiloides* Abe, FAT 306, on Czapek agar, 10 days.
Fig. C-16 (lower left) *Penicillium chrysogenum* Thom mut. *fulvescens* Takashima, Arima and Abe, FAT 515, on Czapek agar, 10 days.
Fig. C-17 (lower right), *Penicillium melearinum* Biourge var. *viridi-flavum* Abe, FAT 525, on Czapek agar, 10 days.

Plate IV

Fig. C-18 (upper left), *Penicillium digitatum* Saccardo var. *latum* Abe, FAT 605, on Czapek agar, 10 days.

Fig. C-19 (upper right) *Penicillium roqueforti* Thom var. *punctatum* Abe, FAT 314, on Czapek agar, 10 days.

Fig. C-20 (center left), *Penicillium casei* Staub var. *compactum* Abe, FAT 1276, on Czapek agar, 10 days.

Fig. C-21 (center right), *Penicillium pseudo-casei* Abe, FAT 317, on Czapek agar, 10 days.

Fig. C-22 (lower left), *Penicillium brunneo-stoloniferum* Abe, FAT 1132, on Czapek agar, 10 days.

Fig. C-23 (lower right), *Penicillium viridi-cyclopium* Abe, FAT 843, on Czapek agar, 10 days.

Plate V

Fig. C-24 (upper left), *Penicillium palitans* Westling var. *echinoconidium* Abe, FAT 848, on Czapek agar, 10 days.

Fig. C-25 (upper right), *Penicillium claviforme* Bainier mut. *candicans* Abe and Ura, FAT 1277, on Czapek agar, 10 days.

Fig. C-26 (center left), *Penicillium claviforme* Bainier *mut. olivicolor* Abe and Ura, FAT 1278, on Czapek agar, 10 days.

Fig. C-27 (center right), *Penicillium clavigerum* Demelius, FAT 1161, on Czapek agar, 10 days.

Fig. C-28 (lower left), *Penicillium aculeatum* Raper and Fennell var. *apiculatum* Abe FAT 1207, on Czapek agar, 10 days.

Fig. C-29 (lower right), *Penicillium concavo-ruglosum* Abe, FAT 710, on Czapek agar, 10 days.

Plate VI

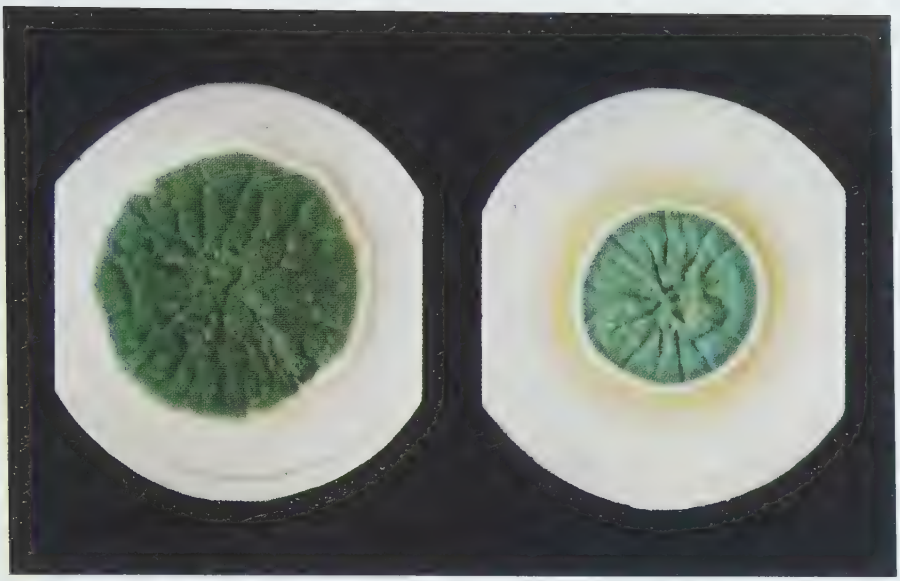

Fig. C-30 (upper left), *Penicillium paraherquei* Abe, FAT 971, on Czapek agar, 10 days.

Fig. C-31 (upper right), *Penicillium estinogenum* Komatsu and Abe, FAT 1196, on Czapek agar, 10 days.

Plate VII

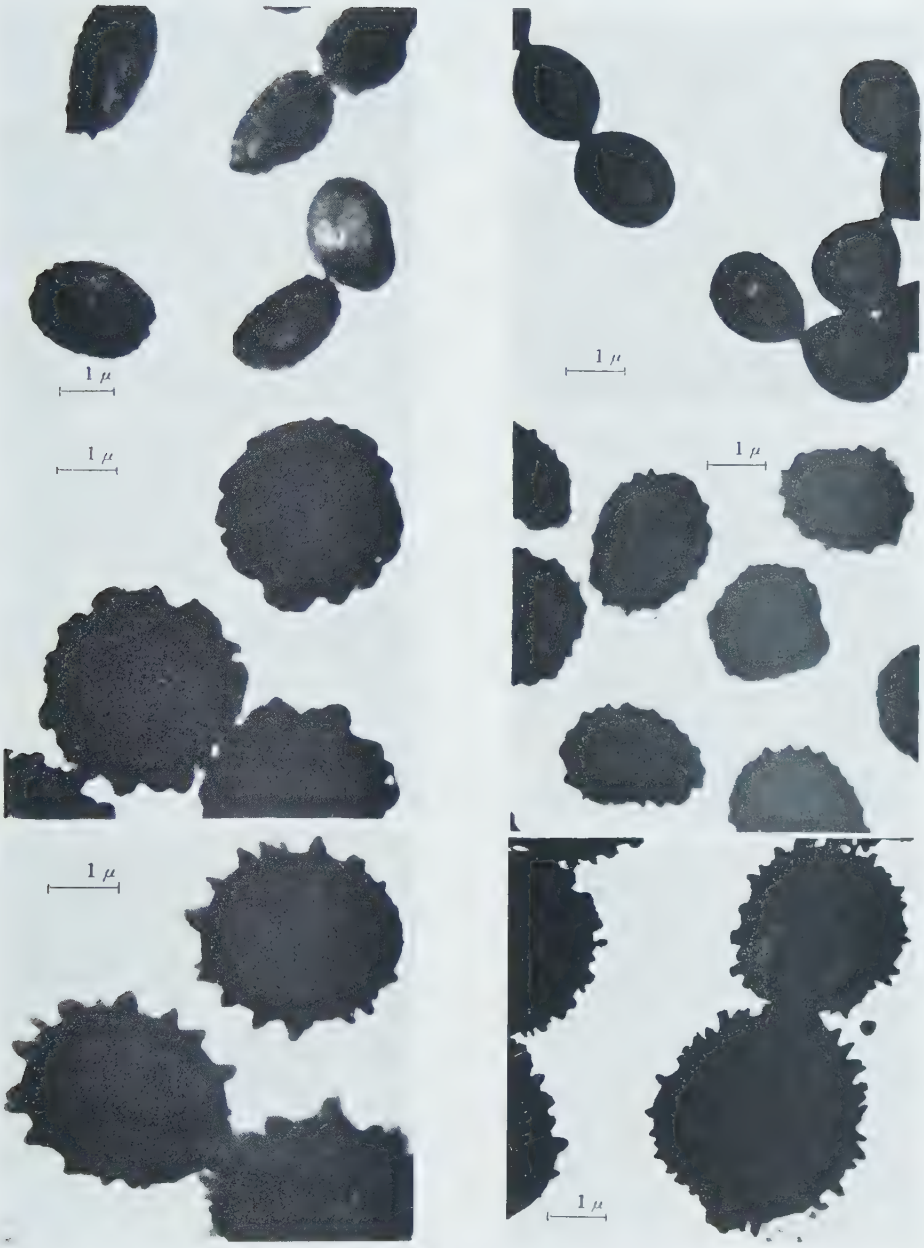

Fig. E-1 (upper left), *Penicillium thomii* Maire var. *flavescens* Abe ,FAT 340, conidia showing the delicately rough walls and the elliptical form.

Fig. E-2 (upper right), *Penicillium cinnamopurpureum* Abe, FAT 362, conidia showing the smooth or nearly so walls and the elliptical or subglobose form.

Fig. E-3 (center left), *Penicillium purpurrescens* (Sopp) Raper, Thom and Fennell, FAT 559, conidia showing the conspicuous verruculose walls and the globose or subglobose form.

Fig. E-4 (center right), *Penicillium spinulosum* Thom, FAT 1137, conidia showing the spinulose walls and the subglobose to globose form.

Fig. E-5 (lower left), *Penicillium lilacino-echinulatum* Abe, FAT 84, conidia showing the conspicuously echinulate or verruculose walls and globose or subglobose form.

Fig. E-6 (lower right), *Penicillium fuscum* (Sopp) Raper, Thom and Fennell, FAT 1343, conidia showing the conspicuous echinulate or verruculose or tuberculose walls and the globose or subglobose form.

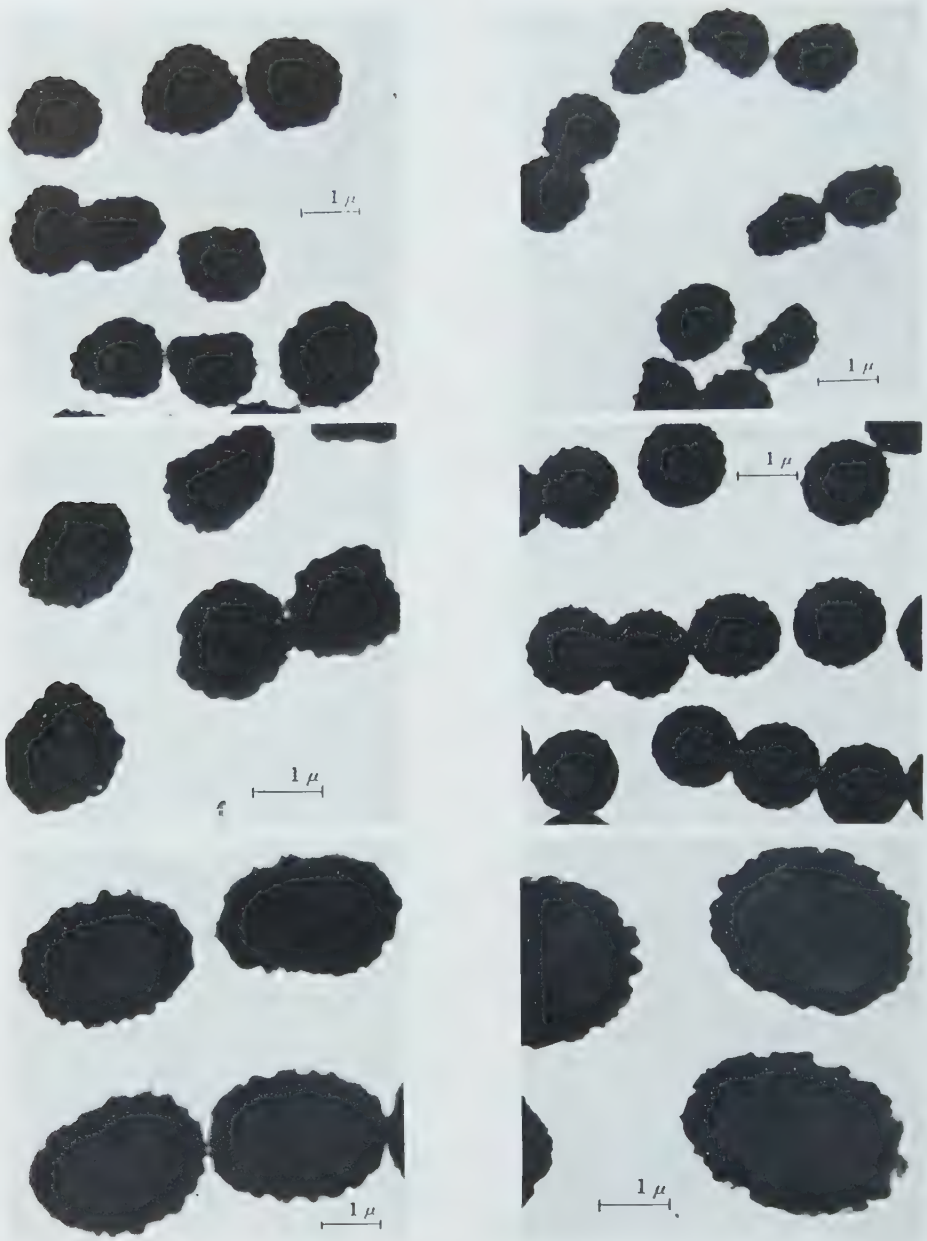

Fig. E 7 (upper left). *Penicillium citreo-viride* Biourge, FAT 959, conidia showing the delicately rough walls and the globose or subglobose form.

Fig. E 8 (upper right), *Penicillium citreo-viride* Biourge (synonym, *Penicillium toxicarium* Miyake), FAT 745, conidia showing the delicately rough walls and the globose or subglobose form.

Fig. E-9 (center left), *Penicillium citreo-viride* Biourge (synonym, *Penicillium toxicarium* Miyake), FAT 1269, conidia showing the delicately rough walls and the globose or subglobose form.

Fig. E 10 (center right), *Penicillium citreo-viride* Biourge var. *aeneum* Abe, FAT 123, conidia showing the delicately rough walls and the globose or subglobose form.

Fig. E 11 (lower left), *Penicillium trzebinskii* Zaleski var. *magnum* Sakaguchi and Abe, FAT 24, conidia showing the echinulate or verruculose walls and the long elliptical form.

Fig. E-12 (lower right), *Penicillium trzebinskianum* Abe, FAT 1138, conidia showing the echinulate or verruculose walls and the elliptical form.

Plate IX

Fig. E-13 (upper left), *Penicillium trzebinskianum* Abe, FAT 728, conidia showing the echinulate or verruculose walls and the elliptical form.

Fig. E-14 (upper right), *Penicillium fusco-flavum* Abe, FAT 1081, conidia showing the echinulate or verruculose walls and strongly elliptical form.

Fig. E-15 (center left), *Penicillium adametzioides* Abe, FAT 1302, conidia showing the smooth or nearly so walls and elliptical or ovate form.

Fig. E-16 (center right), *Penicillium decumbens* Thom var. *atro-virens* Abe, FAT 1140, conidia showing the loosely or delicately rough rough walls and the elliptical or subglobose form.

Fig. E-17 (lower left), *Penicillium fellutanum* Biourge var. *nigro-castaneum* Abe, FAT 623, conidia showing the loosely or delicately rough walls and the elliptical or subglobose form.

Fig. E-18 (lower right), *Penicillium charlesii* Smith var. *rapidum* Abe, FAT 831, conidia showing the loosely rough walls and the globose form

Plate X

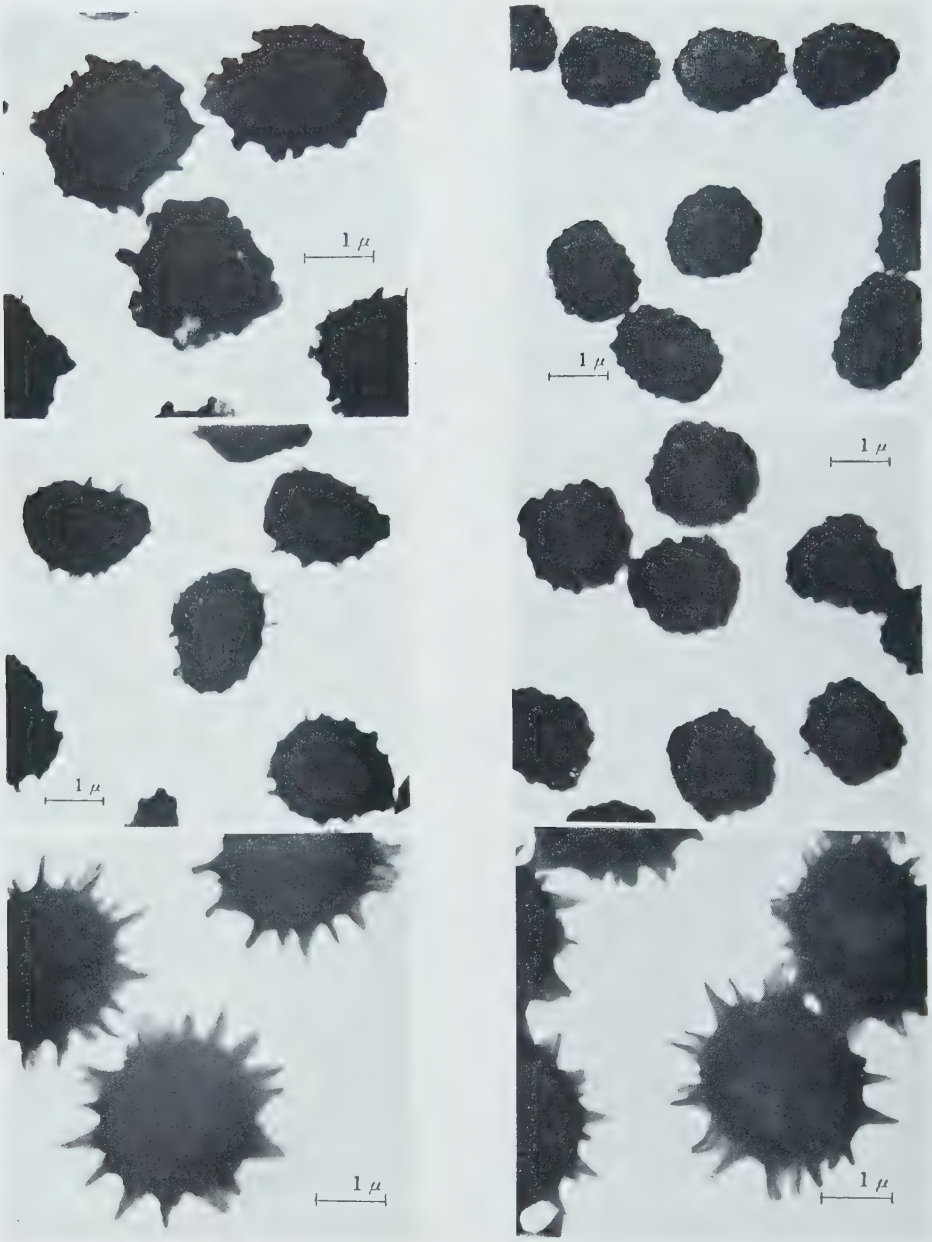

Fig. E-19 (upper left), *Penicillium velutinum* van Beyma, FAT 1121, conidia showing the conspicuous echinulate or verruculose walls and the ovate or subglobose form.

Fig. E-20 (upper right), *Penicillium janthinellum* Biourge, FAT 909, conidia showing the delicately rough walls and the ovate or subglobose form.

Fig. E-21 (center left), *Penicillum echinulo-nalgiovense* Abe, FAT 907, conidia showing the echinulate or verruculose walls and the ovate or subglobose form.

Fig. E-22 (center right), *Penicillium canescens* Sopp, FAT 832, conidia showing the globose or subglobose with the delicately echinulate or verruculose walls.

Fig. E-23 (lower left), *Penicillium nigricans* Thom var. *sulfuratum* Abe, FAT 536, conidia showing the aculeate walls and the globose or subglobose form.

Fig. E-24 (lower right), *Penicillium melinii* Thom, FAT 581, conidia showing the aculeate walls and the globose to subglobose form.

Plate XI

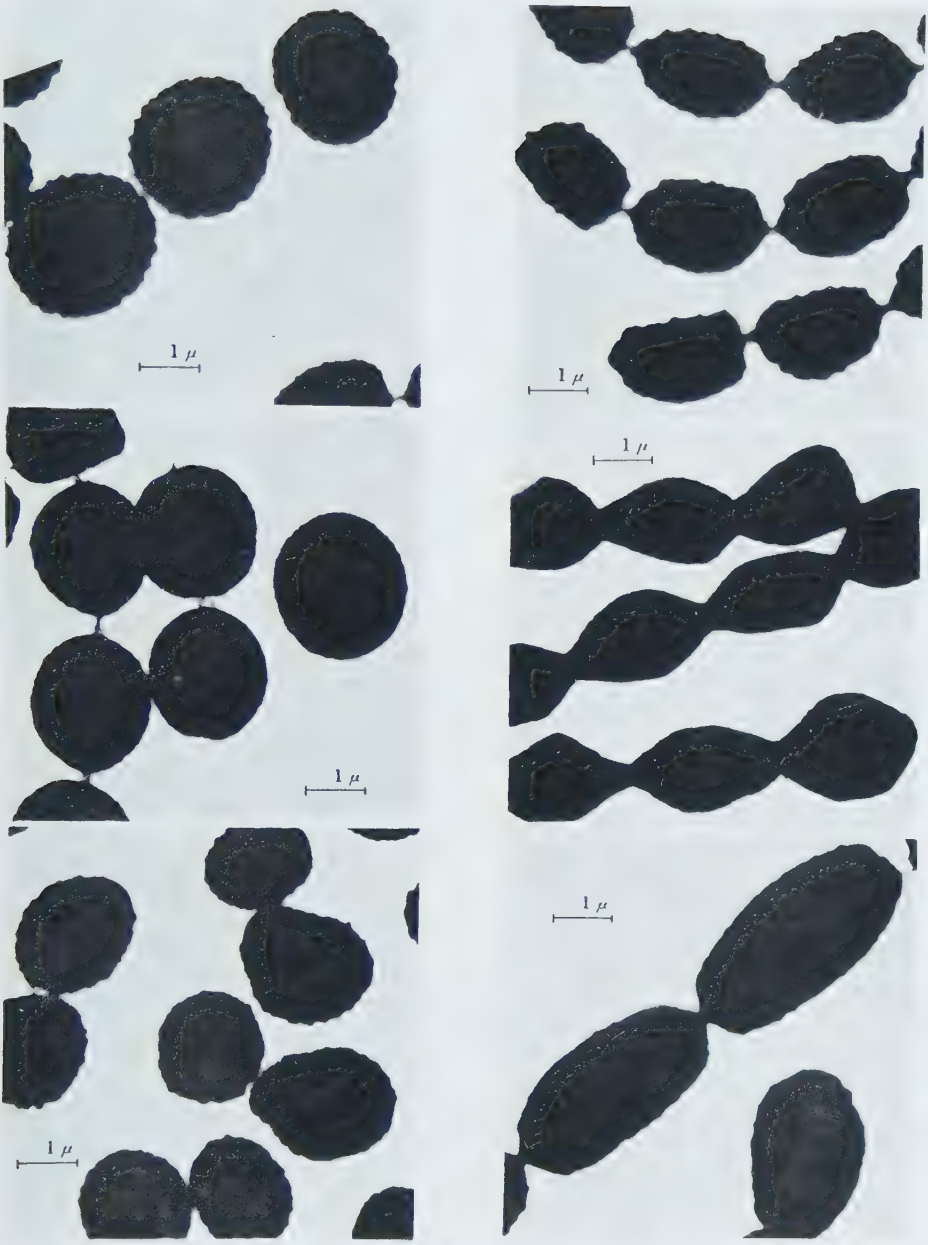

Fig. E 25 (upper left), *Penicillium citreo-virens* Abe, FAT 319, conidia showing the delicately rough walls and the globose or subglobose form.

Fig. E 26 (upper right), *Penicillium corylophiloides* Abe, FAT 862, conidia showing the elliptical form with delicately rough walls.

Fig. E 27 (center left), *Penicillium chrysogenum* Thom, FAT 506, conidia showing the ovate or subglobose form with the delicately rough walls.

Fig. E 28 (center right), *Penicillium chrysogenum* Thom var. *fulvescens* Takashima, Arima and Abe, FAT 515, conidia showing the smooth or nearly so walls and the elliptical form.

Fig. E 29 (lower left), *Penicillium meleagrinum* Biourge var. *viridi-flavum* Abe, FAT 1255, conidia showing the delicately rough walls and the elliptical or subglobose form.

Fig. E 30 (lower right), *Penicillium digitatum* Saccardo var. *latum* Abe, FAT 605, conidia showing the cylindrical form with delicately rough walls.

Plate XII

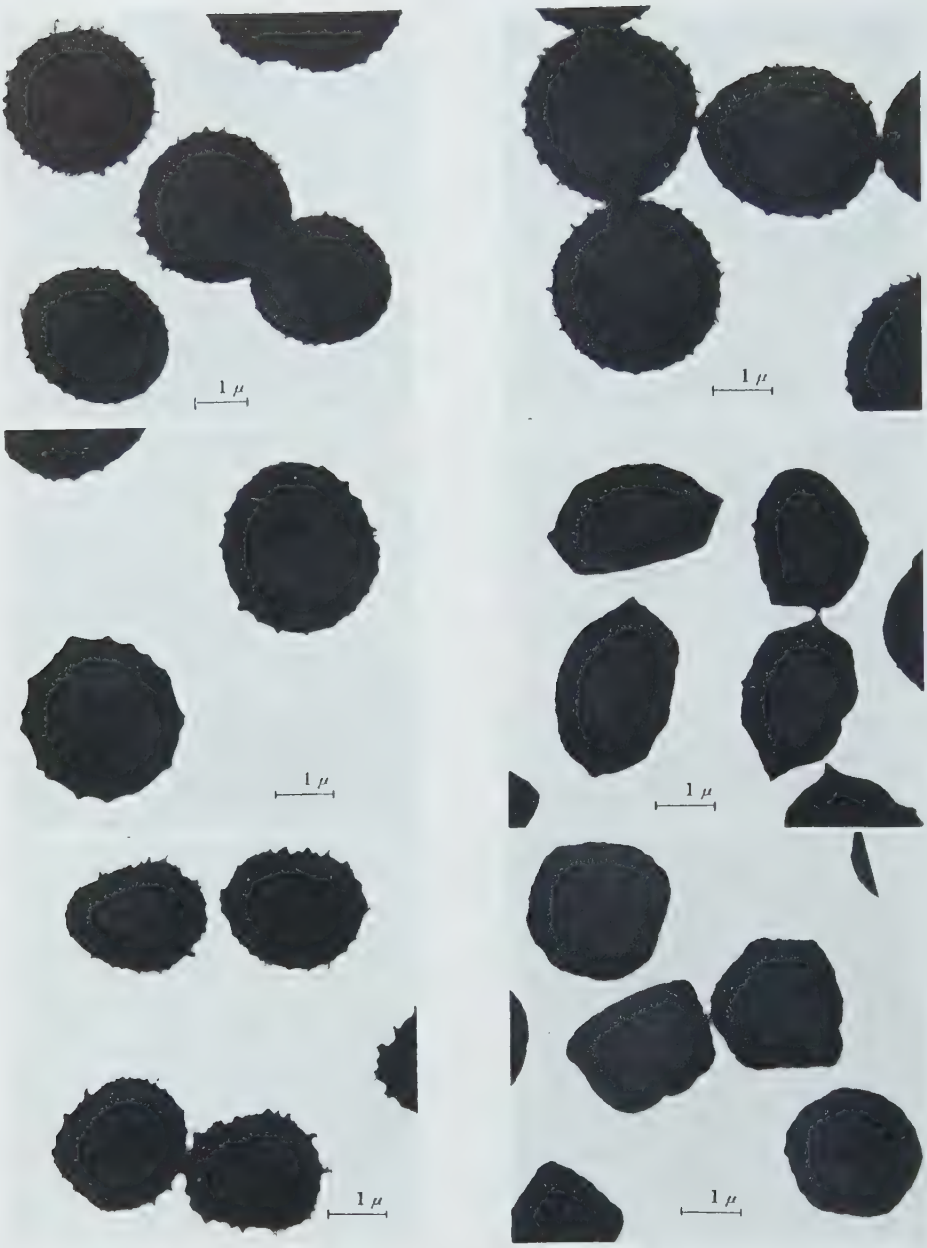

Fig. E-31 (upper left), *Penicillium roqueforti* Thom var. *punctatum* Abe, FAT 315, conidia showing delicately echinulate or verruculose walls and globose form.

Fig. E-32 (upper right), *Penicillium roqueforti* Thom var. *punctatum* Abe, FAT 314, conidia showing delicately echinulate or verruculose walls and globose form.

Fig. E-33 (center left) *Penicillium casei* Staub var. *compactum* Abe, FAT 1276, conidia showing the spinulose walls and the ovate or subglobse form.

Fig. E 34 (center right), *Penicillium pseudo-casei* Abe, FAT 317, conidia showing the smooth or nearly so walls and the elliptical to ovate form.

Fig. E-35 (lower left), *Penicillium brunneo-stoloniferum* Abe, FAT 1132, conidia showing the echinulate or verruculose walls and the ovate or subglobose form.

Fig. E-36 (lower right), *Penicillium viridi-cyclopium* Abe, FAT 843, conidia showing the globose or subglobose and the smooth or nearly so walls.

Plate XIII

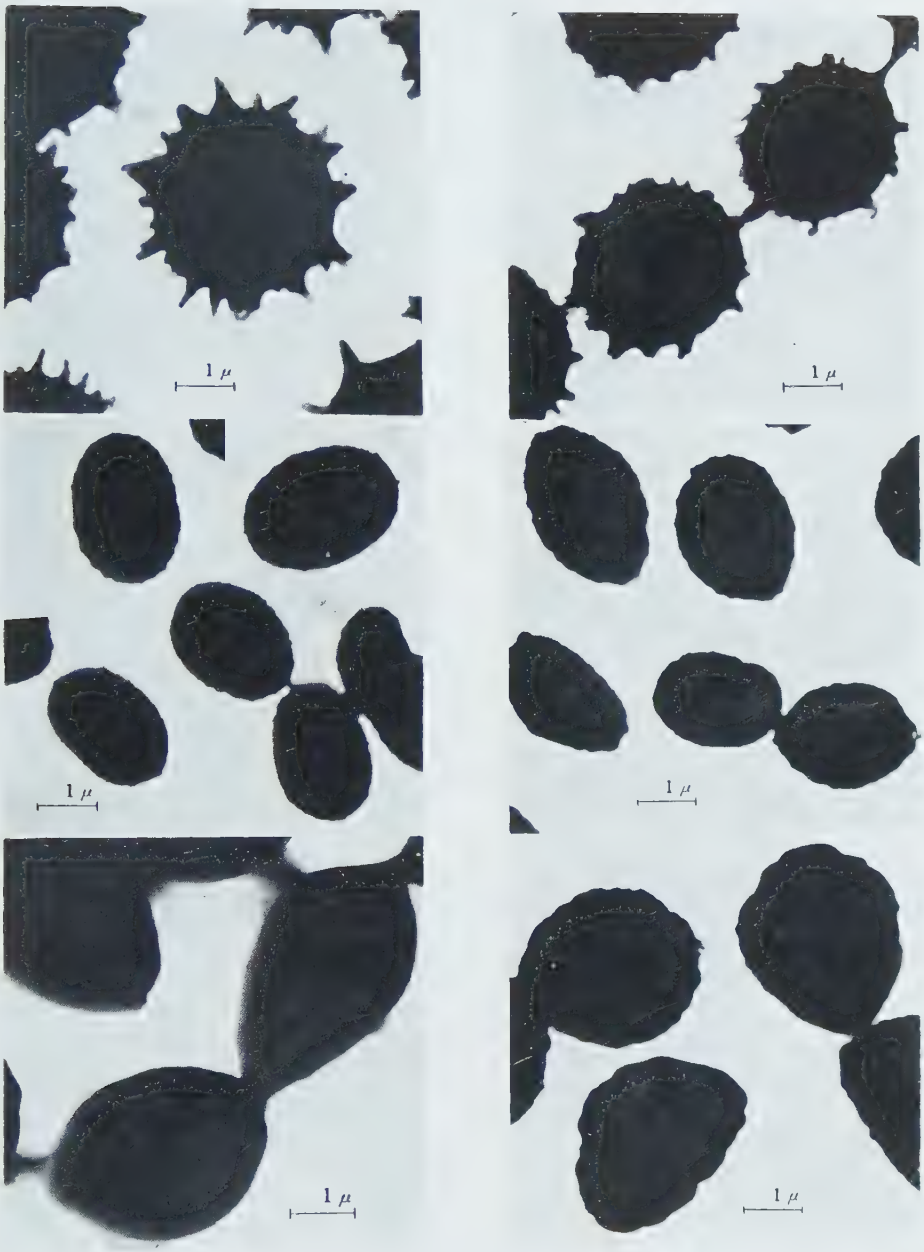

Fig. E-37 (upper left), *Penicillium palitans* Westling var. *echinoconidium* Abe, FAT 848, conidia showing the conspicuous echinulate or verruculose walls and the globose form.

Fig. E-38 (upper right), *Penicillium cyclopium* Westling var. *echinulatum* Raper and Fennell, FAT 987, conidia showing the conspicuous echinulate or verruculose walls and the globose form.

Fig. E-39 (center left), *Penicillium clavigerum* Demelius, FAT 1161, conidia showing elliptical form with deilcately rough walls.

Fig. E-40 (center right) *Penicillium funiculosum* Thom, FAT 1267, conidia showing the elliptical form with the delicately rough walls.

Fig. E-41 (lower left), *Penicillium islandicum* Sopp, FAT 1270, conidia showing the fusiform form with the smooth walls.

Fig. E-42 (lower right), *Penicillium verruculosum* Peyronel, FAT 356, conidia showing the delicately echinulate or verruculose walls and the ovate form.

Plate XIV

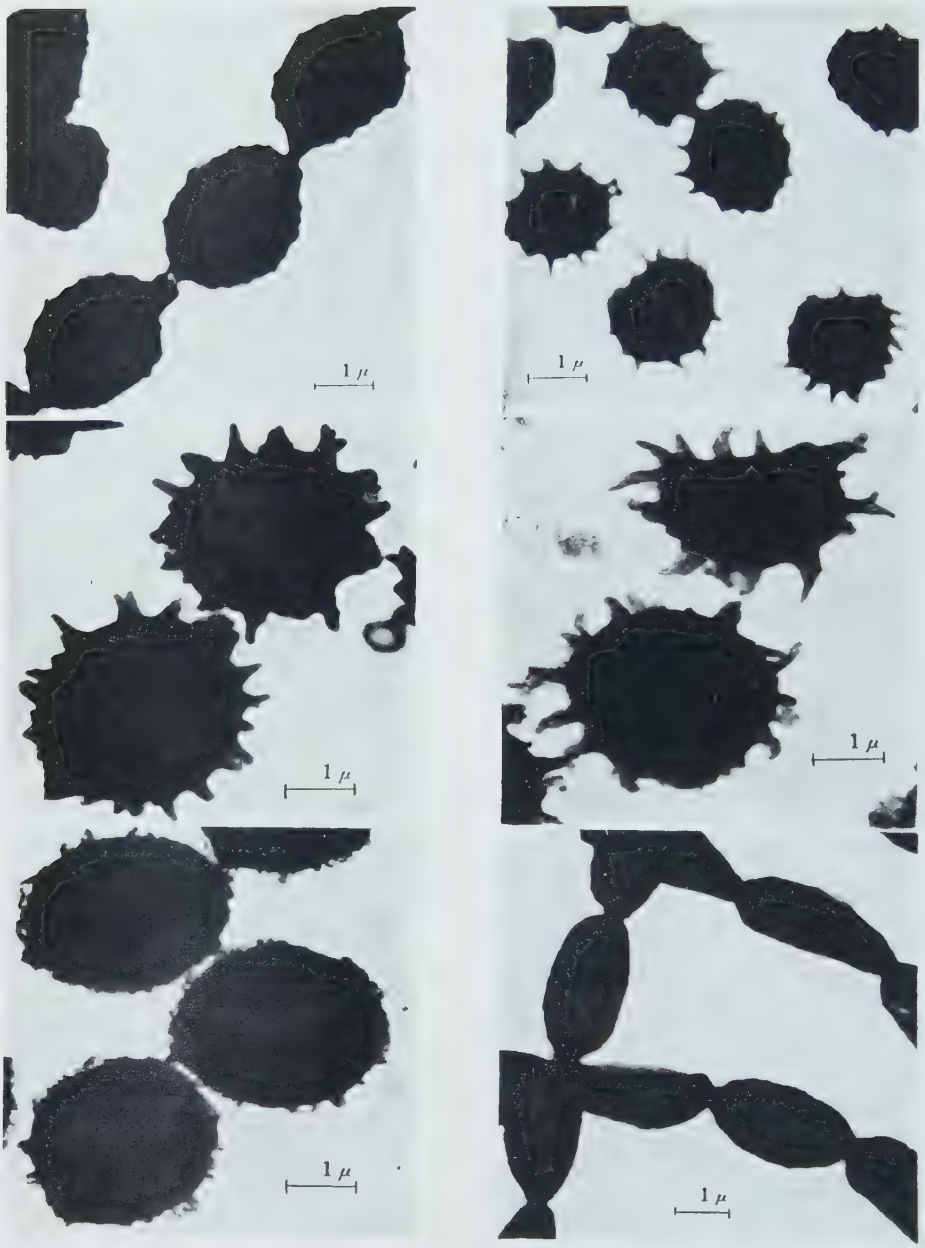

Fig. E-43 (upper left), *Penicillium verruculosum* Peyronel (synonum, *Penicillium echinosporum* Nehira), FAT 1388, conidia showing the delicately echinulate walls and the ovate form.

Fig. E-44 (upper right), *Penicillium aculeatum* Raper and Fennell, FAT 810, conidia showing the conspicuous echinulate or verruculose walls and the globose or subglobose form.

Fig. E-45 (center left), *Penicillium aculeatum* Raper and Fennell var. *apiculatum* Abe, FAT 1152, conidia showing the conspicuous echinulate or verruculose.

Fig. E-46 (center right), *Penicillium aculeatum* Raper and Fennell var. *apiculatum* Abe, FAT 1189, conidia showing the conspicuous echinulate or verruculose walls and the straw-berry form.

Fig. E-47 (lower left), *Penicillium rugulosum* Thom, FAT 375, conidia showing the echinulate or verruculose walls and the elliptical form.

Fig. E-48 (lower right), *Penicillium concavo-rugulosum* Abe, FAT 672, conidia showing the smooth or nearly so walls and long elliptical form.

Plate XV

Fig. E 49 (upper left), *Penicillium concavo-rugulosum* Abe, FAT 924, conidia showing the delicately rough walls and the long elliptical form.

Fig. E 50 (upper right), *Penicillium herquei* Bainier and Sartory, FAT 1313, conidia showing the long elliptical or rugby-ball-like form with the delicately rough walls.

Fig. E-51 (center left), *Penicillium paraherquei* Abe, FAT 964, conidia showing the elliptical form with the delicately echinulate or verruclose walls.

Fig. E-52 (center right), *Penicillium estinogenum* Komatsu and Abe, FAT 1196, conidia shnowig the granular or verruculose walls and the elliptical or ovate form.

Plate XVI

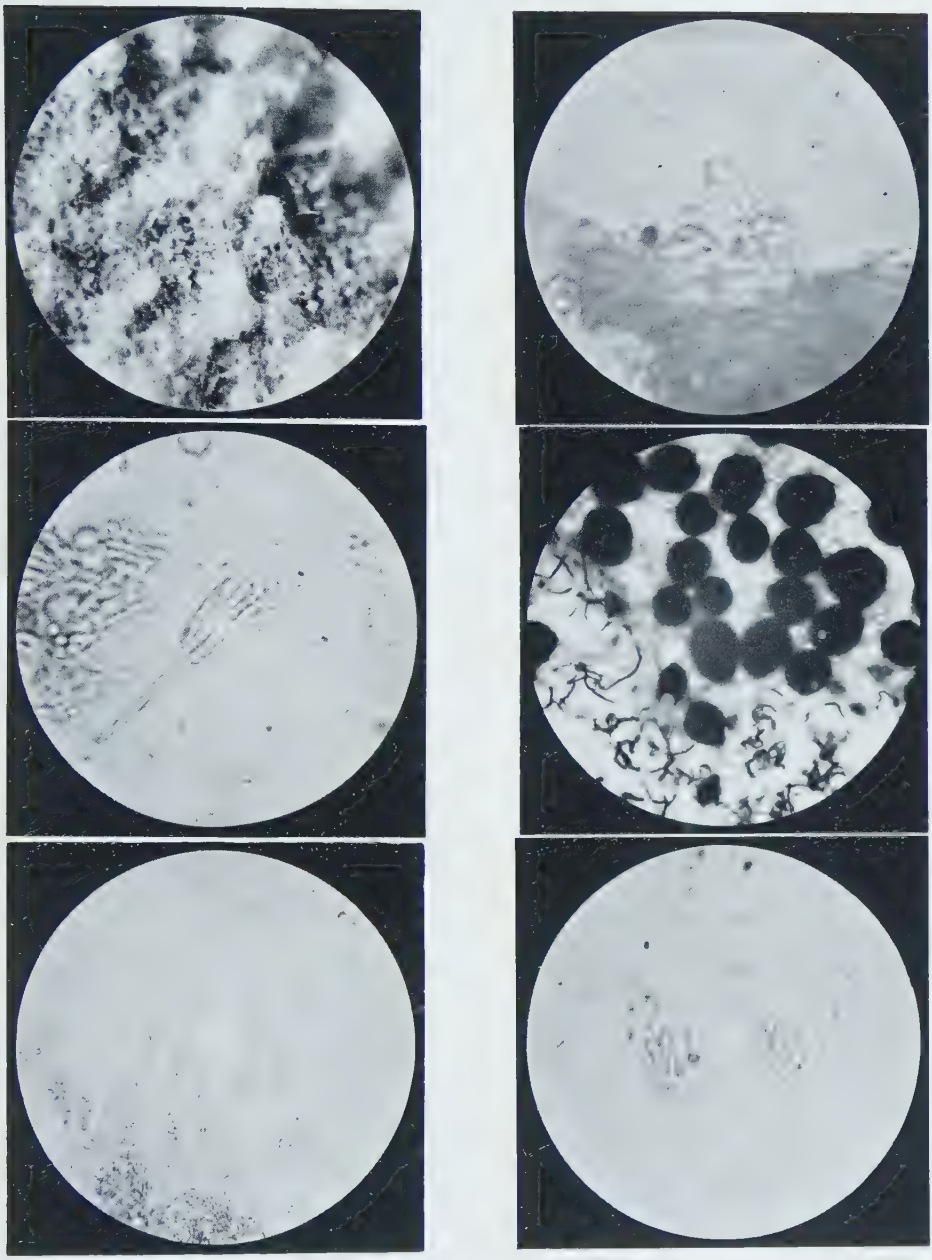

Fig. M 1 (upper left), *Penicillium thomii* Maire var. *flavescens* Abe, FAT 340, low power view of sclerotia on Czapek agar, ×50.

Fig. M 2 (upper right), *Penicillium thomii* Maire var. *flavescens* Abe, FAT 340, crushed sclerotia showing sclerenchyma-like cells, ×500.

Fig. M 3 (centre left), *Penicillium thomii* Maire var. *flavescens*, FAT 340, detail of a single penicillus, ×500.

Fig. M 4 (center right), *Penicillium cinnamopurpureum* Abe, FAT 363, sclerotia as developed on Czapek agar, ×50.

Fig. M 5 (lower left), *Penicillium cinnamopurpureum* Abe, FAT 363, detail of penicilli, ×200.

Fig. M 6 (lower right), *Penicillium lilacino-echinulatum* Abe, FAT 84, detail of penicilli, ×500.

Plate XVII

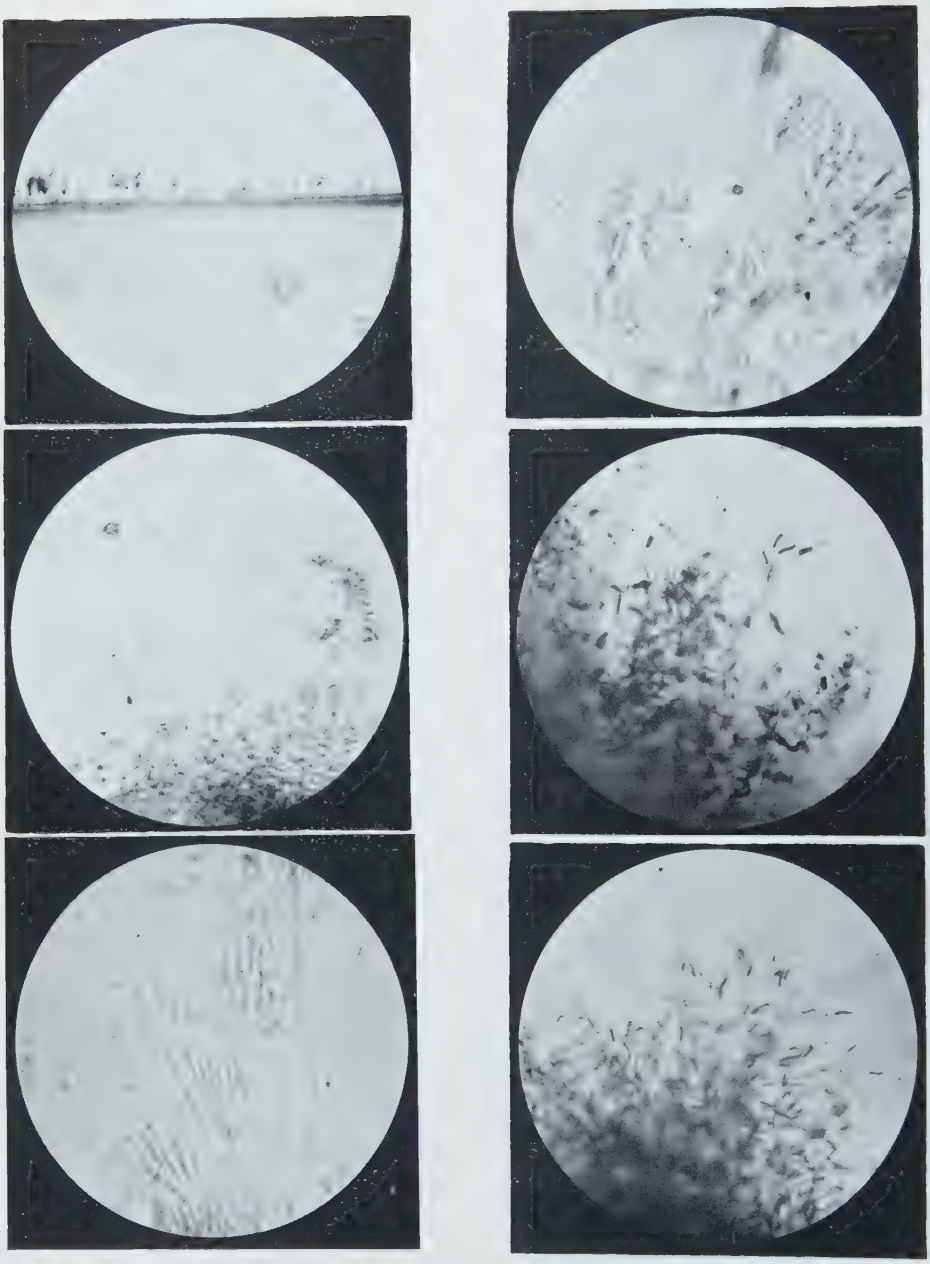

Fig. M-7 (upper left), *Penicillium citreo-viride* Biourge var. *aeneum* Abe, FAT 123, low power view of colony section showing typically velvety character of texture, × 50.

Fig. M-8 (upper right), *Penicillium citreo-viride* Biourge var. *aeneum* Abe, FAT 121. detail of penicilli, ×500.

Fig. M-9 (center left), *Penicillium trzebinskianum* Abe, FAT 1138, detail of penicilli, ×200.

Fig. M-10 (center right), *Penicillium fusco-flavum* Abe, FAT 1081, penicilli as developed at colony margin, ×50.

Fig. M-11 (lower left), *Penicillium adametzioides* Abe, FAT 1301, detail of penicilli, ×500.

Fig. M-12 (lower right), *Penicillium decumbens* Thom var. *atro-virens* Abe, FAT 329, penicilli as developed at colony margin, ×50.

Plate XVIII

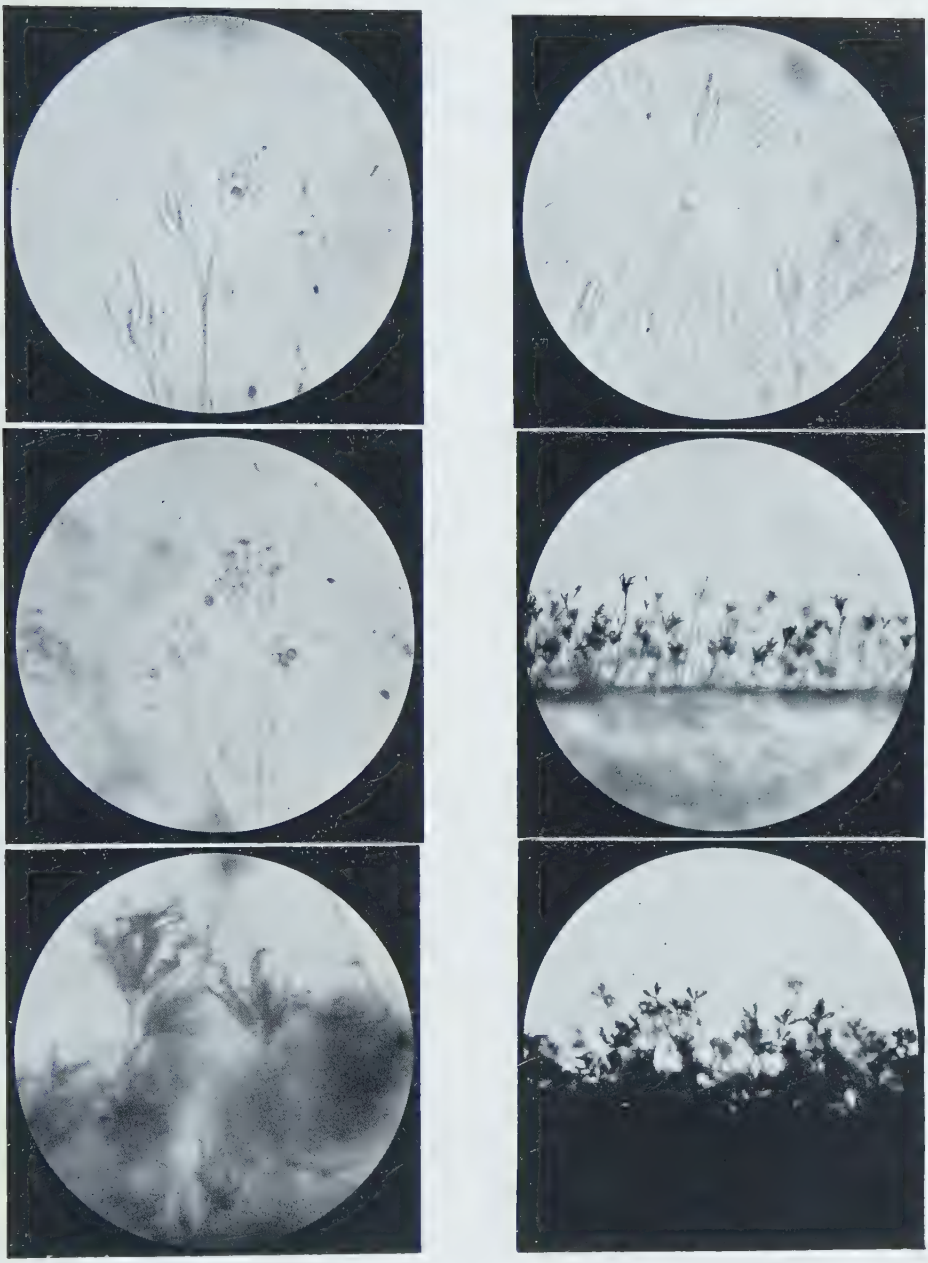

Fig. M-13 (upper left), *Penicillium decumbens* Thom var. *atro-virens* Abe, FAT 329, detail of penicilli, ×500.

Fig. M-14 (upper right), *Penicillium fellutanum* Biourge var. *nigro-castaneum* Abe, FAT 623, detail of penicilli, ×500.

Fig. M-15 (center left), *Penicillium charleshii* Smith var. *rapidum* Abe, FAT 734, detail of penicili, ×500.

Fig. M-16 (center right), *Penicillium echinulo-nalgiovense* Abe, FAT 907, low power view of colony section showing typically velvety character of texture, ×50.

Fig. M-17 (lower left), *Penicillium echinulo-nalgiovense* Abe, FAT 907, enlarged view of penicilli on colony section, ×200.

Fig. M-18 (lower right), *Penicillium nigricans* (*Eainier*) Thom var. *sulfuratum* Abe, FAT 536, low power view of penicilli on colony section, ×50.

Plate XIX

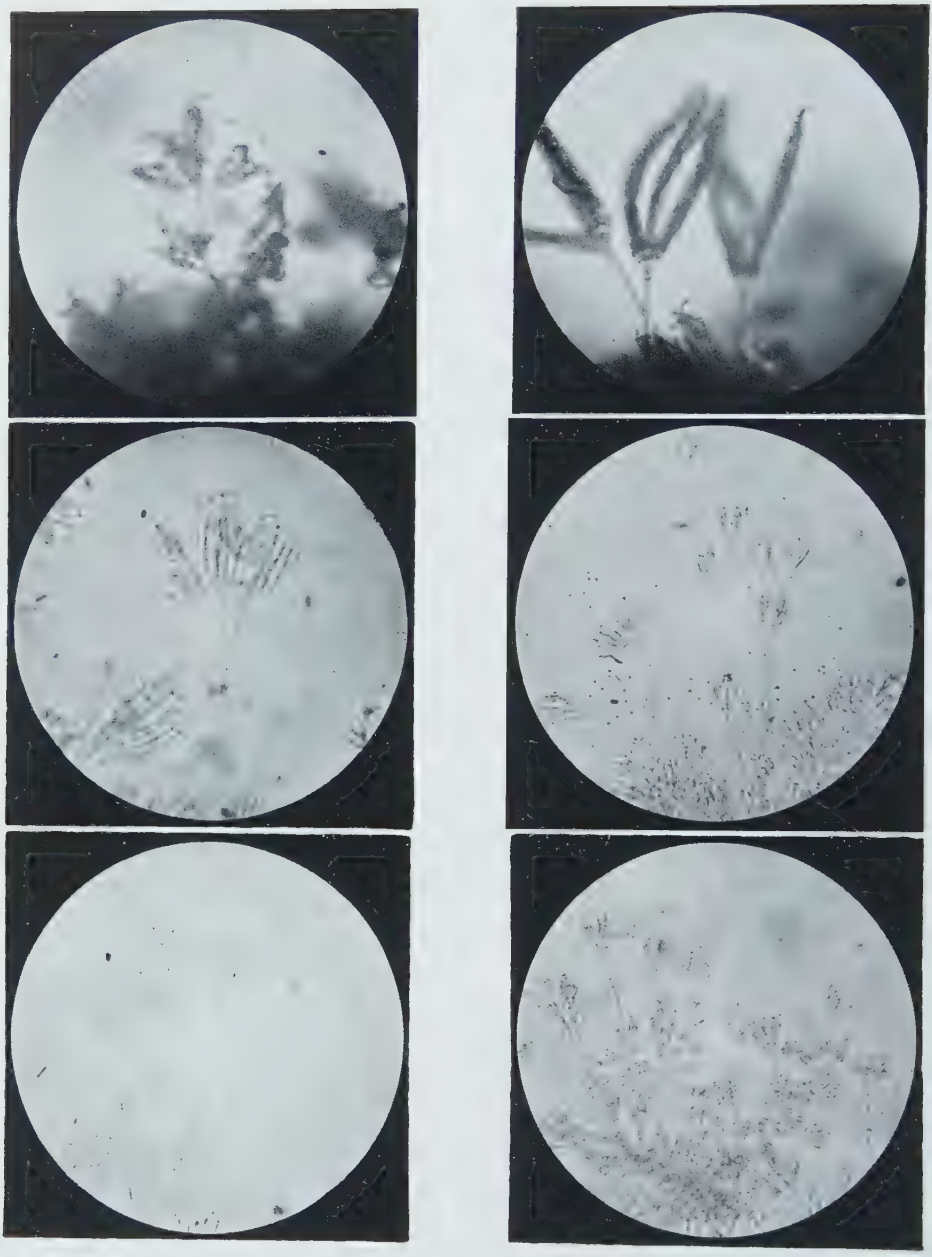

Fig. M-19 (upper left), *Penicillium nigricans* (Bainier) Thom var. *sulfuratum* Abe, FAT 536, enlarged view of penicilli. ×200.

Fig. M-20 (upper right), *Penicillium citreo-virens* Abe, FAT 319, enlarged view of penicilli showing columnar character of conidial chains, ×200.

Fig. M-21 (center left), *Penicillium citreo-virens* Abe, FAT 319, detail of a single penicillus, ×500.

Fig. M-22 (center right), *Penicillium corylophiloides*, FAT 306, detail of penicilli, ×200.

Fig. M-23 (lower left), *Penicillium chrysogenum* Thom mut. *fulvescens* Takashima Arima and Abe, detail of penicilli, ×200.

Fig. M-24 (lower right), *Penicillium meleagrinum* Biourge var. *viridi-flavum* Abe, FAT 652, detail of penicilli, ×200.

Plate XX

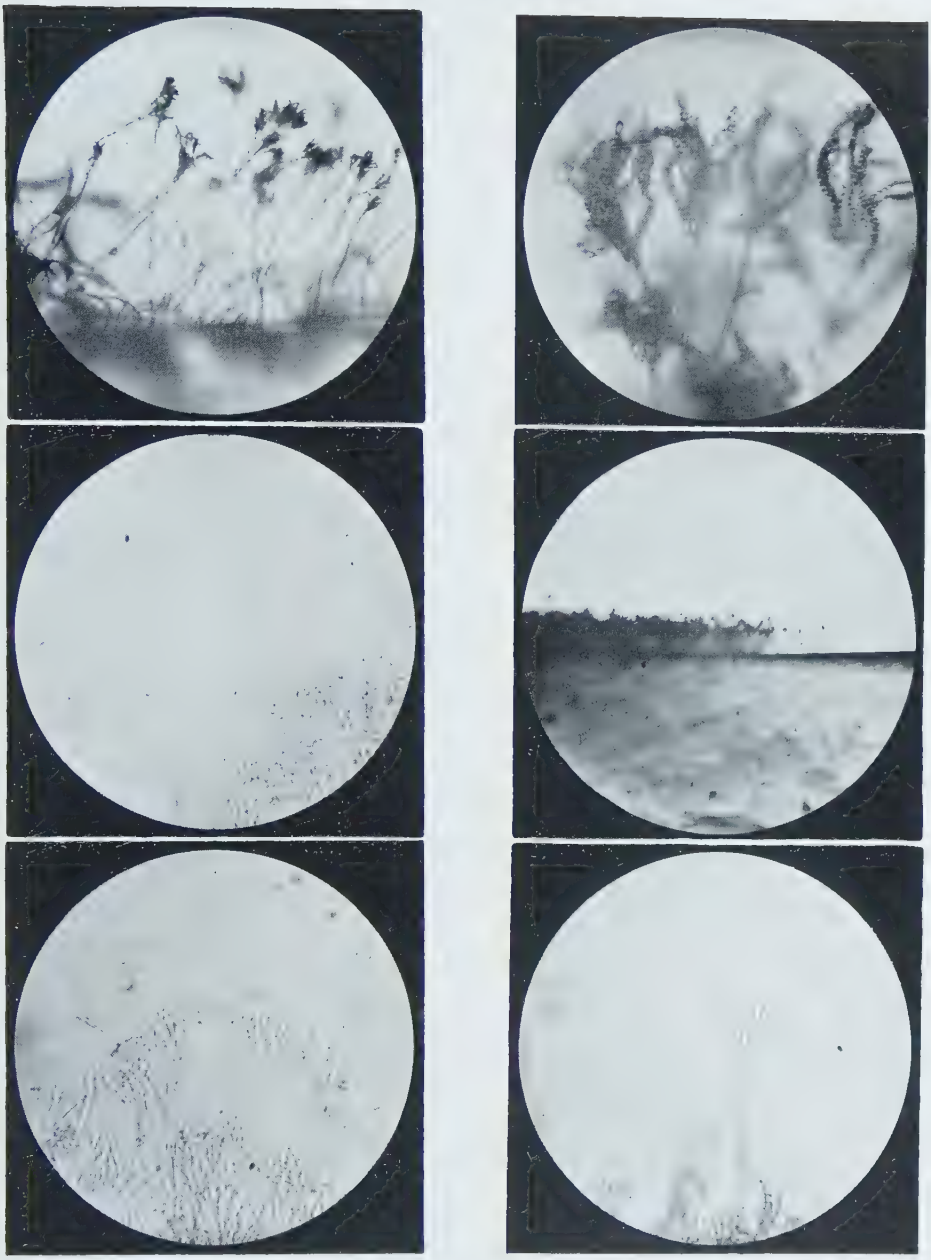

Fig. M 25 (upper left), *Penicillium roqueforti* Thom, FAT 543, low power view of colony section showing typically velvety character of texture, ×50.

Fig. M 26 (upper right), *Penicillium digitatum* Saccardo var. *latum* Abe, FAT 605, enlarged view of penicilli on colony section, ×200.

Fig. M 27 (center left), *Penicillium digitatum* Saccardo var. *latum* Abe, FAT 605, detail of penicilli, ×200.

Fig. M 28 (center right), *Penicillium roqueforti* Thom var. *punctatum* Abe, FAT 314, low power view of colony section showing typically velvety character of texture, ×20.

Fig. M 29 (lower left), *Penicillium roqueforti* Thom var. *punctatum* Abe, FAT 315, detail of penicilli, ×200.

Fig. M 30 (lower right), *Penicillium casei* Staub var. *compactum* Abe, FAT 1276, detail of a single penicillus, ×200.

Plate XXI

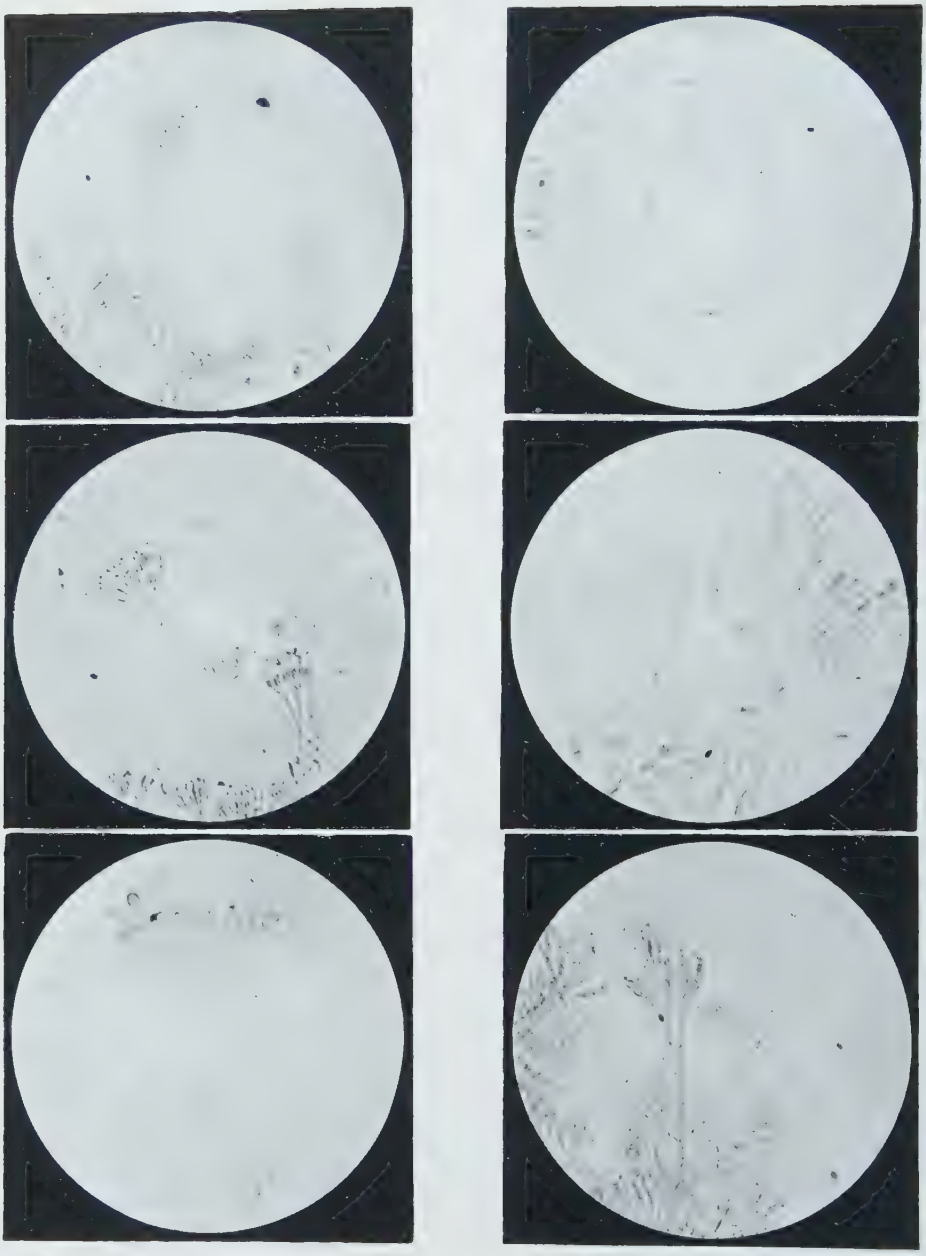

Fig. M 31 (upper left), *Penicillium pseudo-casei* Abe, FAT 317, detail of penicilli, ×200.
Fig. M-32 (upper right), *Penicillium pseudo-casei* Abe, FAT 1165, detail of penicilli, ×200.
Fig. M-33 (center left), *Penicillium brunneo-stoloniferum* Abe, FAT 1132, detail of penicilli, ×200.
Fig. M-34 (center right), *Penicillium viridi-cyclopium* Abe, FAT 843, detail of penicilli, ×500.
Fig. M-35 (lower left), *Penicillium palitans* Westling var. *echinulatum* Abe, FAT 1019, detail of a single penicillius, ×500.
Fig. M-36 (lower right), *Penicillium claviforme* Bainier mut. *candicans* Abe and Ura, FAT 1277, detail of penicilli, ×200.

Plate XXII

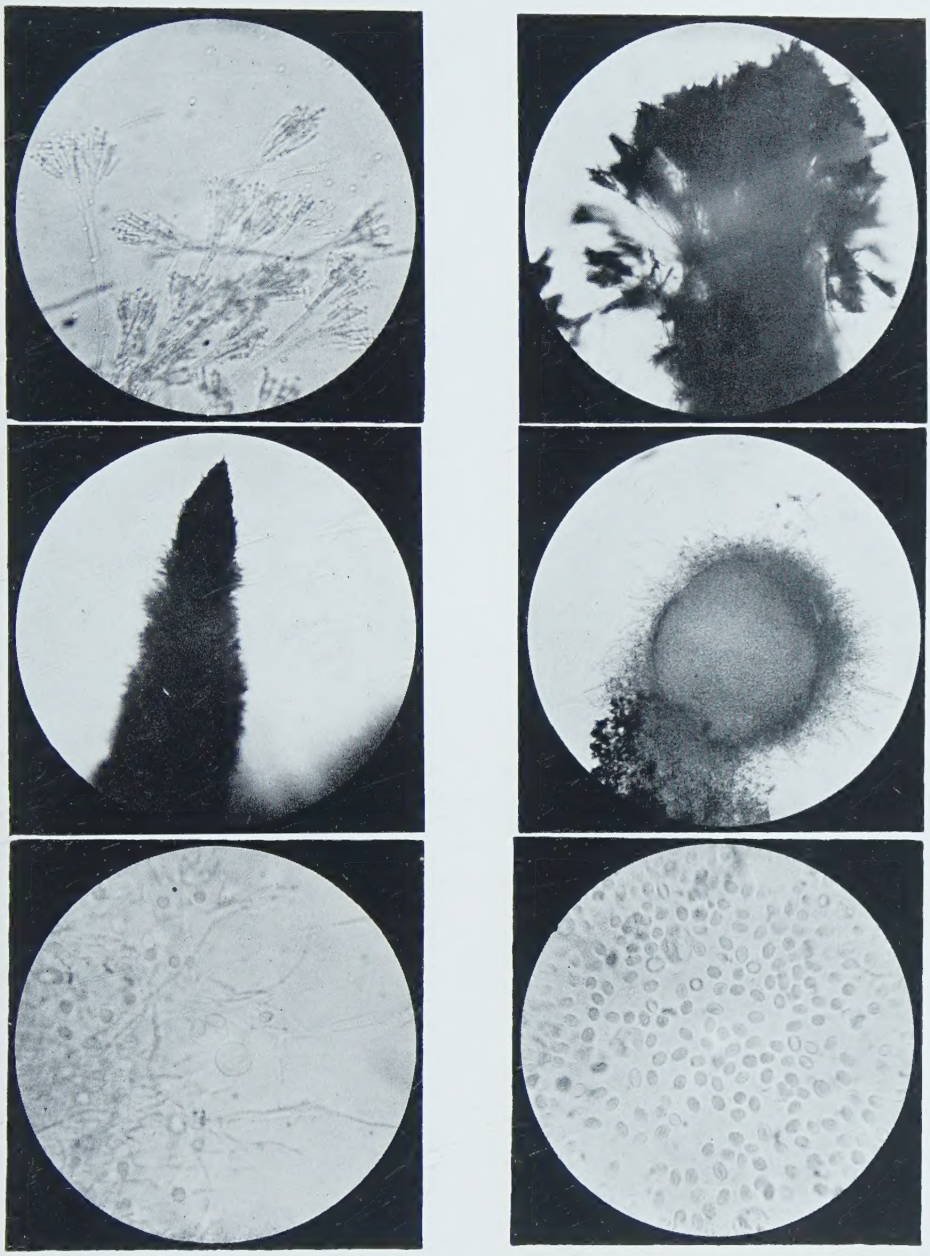

Fig. M-37 (upper left), *Penicillium claviforme* mut. *olivicolor* Abe and Ura, FAT 1278, detail of penicilli, ×200.

Fig. M-38 (upper right), *Penicillium claviforme* Bainier, FAT 1263, enlarged view of a single coremium showing detail of structure, ×50.

Fig. M-39 (center left), *Penicillium clavigerum* Demelius, FTA 1161, enlarged view a single coremium showing detail of structure, ×20.

Fig. M-40 (center right), *Penicillium wortmanni* Klöcker, FAT 364, enlarged view of a single perithecium, ×50.

Fig. M-41 (lower left), *Penicillium wortmanni* Klöcker, FAT 364, crushed perithecium with asci containing elliptical ascospore, ×500.

Fig. M-42 (lower right), *Penicillium wortmanni* Klöcker, FAT 364, ascospore showing the elliptical form and the conspicuous roughen walls, ×500.

Plate XXIII

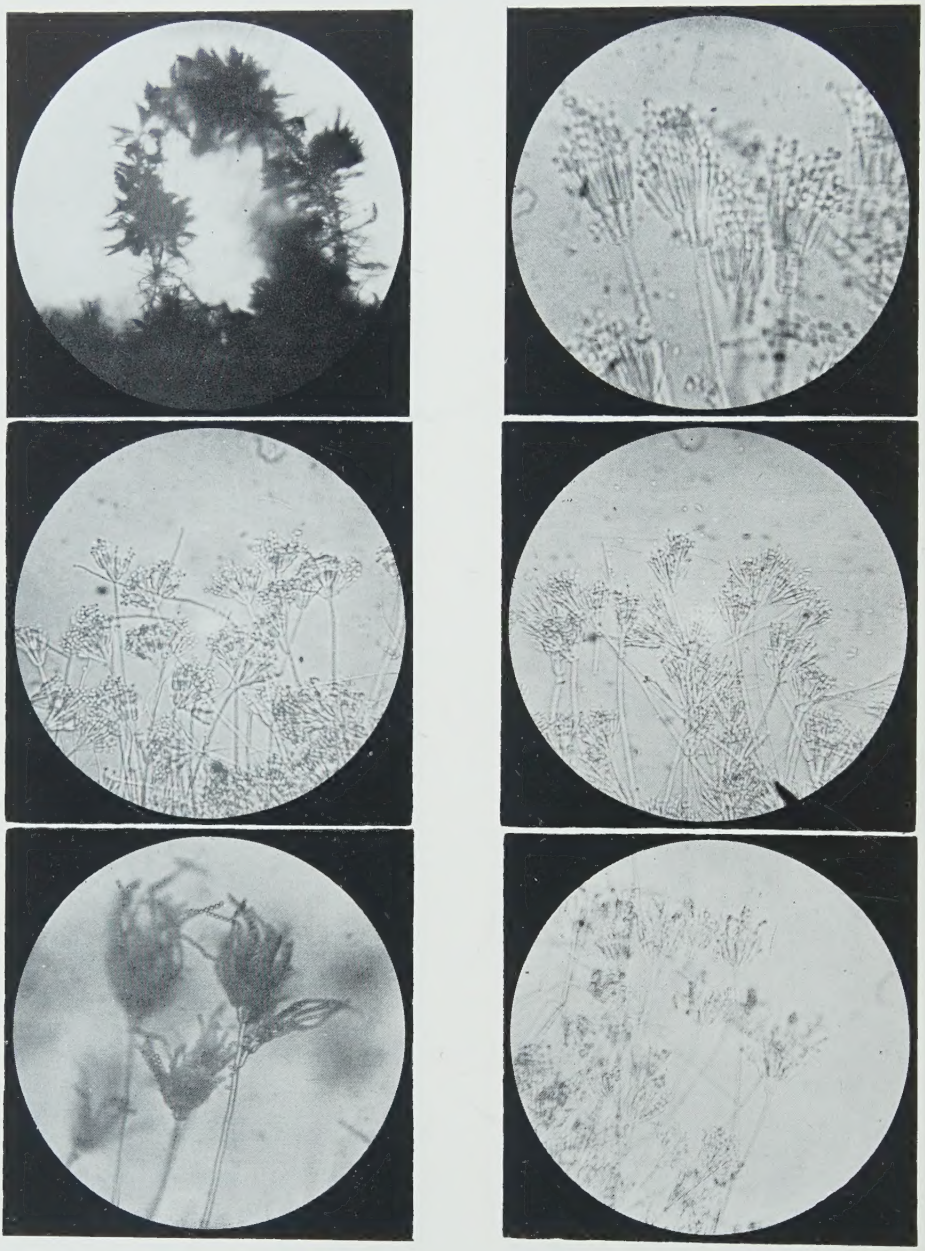

Fig. M-43 (upper left), *Penicillium funiculosum* Thom, FAT 1267, low power view of colony section showing strongly fnniculose habit of serial hyphae of conidial structures, ×50.

Fig. M-44 (upper right), *Penicillium purpurogenum* Stoll, FAT 1149, detail of penicilli, ×500.

Fig. M-45 (center left), *Penicillium aculeatum* Raper and Fennell var. *apiculatum* Abe, FAT 1207, detail of penicilli, ×200.

Fig. M-46 (center right), *Penicillium concavo-rugulosum* Abe, FAT 383, detail of penicilli, ×200.

Fig. M-47 (lower left), *Penicillium paraherquei* Abe, FAT 824, enlarged view of penicilli on colony section, ×200.

Fig. M-48 (lower right), *Penicillium estinogenum* Komastu and Abe, FAT 1196, detail of penicilli, ×200.

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